

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXVII. NEW YORK, SATURDAY, OCTOBER 20, 1900. No. 16.

ORIGINAL ARTICLES.

SOME REMARKS ON THE PATHOLOGY AND SURGICAL TREATMENT OF URINARY AND URO-GENITAL TUBERCULOSIS.*

By SAMUEL ALEXANDER, A.M., M.D.,
OF NEW YORK;

PROFESSOR OF GENITO-URINARY DISEASES IN THE CORNELL UNIVERSITY
MEDICAL COLLEGE; SURGEON TO BELLEVUE HOSPITAL.

TUBERCULOSIS of the male uro-genital tract does not differ essentially from tuberculosis in other organs of the body, except that it is, perhaps, more frequently complicated by some form of pus infection. The latter may either antedate the invasion of the tissues by the tubercle bacillus or follow this invasion. The pathological changes produced by these pus infections weaken the resistance of the tissues, intensify the symptoms due to the tuberculous process, frequently obscure the diagnosis of the latter, and render treatment in many cases much more difficult.

Tuberculosis of the uro-genital tract is met with clinically in two forms: First, as a secondary infection, the result of tuberculosis in some other portion of the body, as in the lungs, or it may occur as a manifestation of a generally tuberculous infection of the organism; and, secondly, as a seemingly primary infection affecting at the outset one part of the urinary or genital tract more or less extensively, usually chronic in type. It is this latter form of uro-genital tuberculosis that is of most interest to the surgeon.

It seems strange, notwithstanding the frequency with which tuberculosis is met with as an apparently primary lesion of the uro-genital tract, that so little attention has been given to the subject until within very recent years. A review of the literature of this subject, even during the past decade, is certain to be unsatisfactory to the student seeking positive information upon the subject. There is scarcely a single point either in the pathology or treatment of uro-genital tuberculosis which has not been the subject of discussion and yet in regard to which observers do not differ widely. Notwithstanding, however, the very contradictory statements which have been made, I think it will now be generally admitted by those who are entitled to speak with authority that seemingly primary tuberculous infection of the uro-genital tract does occur, and that it does occur with great frequency. I mean by this that tuberculous lesions are met with clinically in the uro-genital tract without tuberculous lesions being found in any other portion of the organism. It is of course possible that in these cases the

primary infection may not have been in the uro-genital tract, but may have occurred in some other part of the organism, as, for example, in the pulmonary lymph nodes, the lesion being so slight as to escape detection. But, although this may be admitted, there are many questions which are far from being definitely settled; for example, it is by no means certain as to the manner in which the tubercle bacillus finds entrance into the genito-urinary tract; nor are we certain what is the original seat of the disease in any given case; nor what part of the genito-urinary apparatus is most frequently the seat of primary infection. Any one who is familiar with the clinical aspects of genito-urinary tuberculosis, and who has given any study to recent literature upon this subject, must be convinced that we need more positive knowledge before we shall be able to speak with anything like certainty upon these questions.

This is unfortunate, because of the importance of our having a definite answer to these questions from the standpoint of treatment. I venture to suggest that these questions will not be answered until a closer and more cordial relation has been established between those who are clinical observers and those who work in our pathological laboratories. The results of post-mortem examination and of pathological research alone are unquestionably of great value, but in order to reach sound conclusions from such observations it is necessary that the clinical histories of the cases which form the basis of the investigation should also be known. I believe that the necessity for this cooperation in the study of disease between clinicians and pathologists is now appreciated by the profession, and I have great hopes that owing to this our knowledge of these questions will be greatly increased in the near future.

But while we are waiting for this improvement in our methods of scientific investigation of disease, we cannot lose sight of the fact that we are daily confronted by patients suffering from tuberculosis of the uro-genital tract who demand immediate treatment. The pain and suffering which this form of tuberculosis often causes make it all the more imperative that we should use our utmost endeavors so far as our knowledge goes to relieve it. It is, therefore, necessary at the present time that as practical surgeons we should adopt, if only provisionally, a working hypothesis:

First, tubercle bacilli may be introduced into the urethra and other portions of the urinary apparatus may be involved subsequently by an ascending infection. I say this is possible. Clinical obser-

* Read before the New York State Medical Association at the annual meeting, held in New York, October 15, 16, 17, 18, 1900.

vation, however, does not support this view, and I know of no pathological observations to support it. It is certainly true that infection of the anterior portion of the urethra is of very rare occurrence, and when it does occur it is usually the result of the extension of a tuberculous process from the upper urinary tract.

Secondly, I think that it will also be generally admitted that primary tuberculous infection of the uro-genital tract is usually of hemic origin. It is probable that the tubercle bacilli are taken into the organism either through the respiratory or digestive tract, and are then carried by the blood current to some portion of the uro-genital apparatus either directly or indirectly. It seems probable also that tubercle bacilli enter the urinary tract from the blood, most frequently through the kidney. By this I do not mean that the kidney is always the primary seat of genito-urinary tuberculosis—the kidney indeed may frequently escape infection, although the urine coming from it contain the tubercle bacillus. Such urine, containing tubercle bacilli and passing over the mucous membrane of the urinary tract, may cause disease of the bladder and prostate without any infection of the kidney, provided the resistance of these parts has been weakened, as is so frequently the case, by trauma or previous inflammation due to pus infection. This is analogous to the conditions found in ascending and descending pyogenic infections of the uro-genital tract. At the same time clinical observation would lead us to believe that in many if not the majority of cases of urinary tuberculosis the kidney itself sooner or later does not escape infection.

Tuberculous infection of the kidney is usually first met with in the renal pelvis and does not usually begin in the kidney substance. This cannot be stated as a definite rule to which there are no exceptions. I do not believe, however, that all cases of uro-genital tuberculosis are of renal origin. It is certainly possible that the tubercle bacilli may be carried directly by the blood-current to other portions of the urinary or genital tracts, and this undoubtedly does occur, because we find cases in which the disease seems at the start confined to the epididymis or to the prostatic urethra and no evidence, either in the past or in the future history of such cases, makes it necessary for us to insist upon the renal origin of the infection.

Clinically speaking, the most common seat of so-called primary tuberculosis of the uro-genital tract would seem to be in the epididymis. This is always involved before the testicle proper; tuberculosis of the latter I believe only occurs as the direct result of extension of the tuberculous process from the epididymis.

Contrary to the view usually held, my own investigations have led me to believe that, although tuberculous epididymitis may occur alone, it is usually associated with more or less involvement of the prostate or prostatic portion of the urethra. It is impossible, however, to state this

as a positive fact, and more study and better observation will be necessary before this can be done.

Again, while it is possible that tuberculosis of the bladder may occur as a primary affection, the clinical data are wanting to confirm such an opinion. It seems almost certain that tuberculosis of the bladder is always secondary to a primary tuberculosis of the kidney, the bladder becoming affected by descending infection, or is secondary to a primary tuberculosis of the lower uro-genital tract, beginning either in the epididymis or in the prostate; the bladder is then affected by an ascending infection.

Tuberculosis of the uro-genital tract is not caused alone by the introduction of the tubercle bacillus into the organism. There must be in addition a weakened cellular resistance of the part affected. The causes of this diminution in resistance in the uro-genital tract are as yet very imperfectly understood.

The object of operative treatment in primary tuberculosis in any portion of the urinary tract is in the first place curative; that is, we seek to remove as thoroughly as possible the entire focus of disease. When this can be done a cure is possible, but possible only in cases where the general tissue resistance of the patient can be increased and maintained. When the disease has advanced too far to permit of its entire removal, an operation may be justifiable for the purpose either of relieving suffering, or of prolonging life, and even in some of these latter cases a cure is possible if the general tissue resistance can be increased and maintained.

I do not think that we recognize sufficiently the fact that the removal of isolated tuberculous foci is not in itself curative. The experience of every hospital surgeon is convincing that, while the immediate effect of operative treatment upon uro-genital tuberculosis is good, the vast majority of these cases are only temporarily relieved and return sooner or later either with an extension of the original disease or with a new focus of infection in some other portion of the body. As this occurs in some cases where apparently the entire focus of disease has been removed, it is probable that the infection of the uro-genital tract was only apparently primary. The results of operation for tuberculosis are much more satisfactory in patients of the better class who are able to procure a suitable environment after operation, so that their general health and powers of resistance may be increased.

The Importance of an Early Diagnosis.—The value of surgical intervention in the treatment of tuberculosis of the uro-genital tract depends upon the direct origin of the infection and upon the seat and extent of the disease. The more circumscribed the lesion, and the more recent the infection, the better chance is there for effecting a radical cure by operation. It follows, therefore, that it is of the utmost importance to make a diagnosis in every case at the earliest possible moment. The methods of diagnosis

have been much improved during the past few years, and it is along this line that the greatest progress has been made in the study of urinary tuberculosis. But our present methods of diagnosis, although a great improvement on those formerly used, are by no means perfect. But, notwithstanding their defects, it is to be greatly regretted that they are not more generally understood.

It cannot be denied by any one, looking fairly at the facts as they now exist, that the diagnosis of tuberculosis in any portion of the urogenital tract is usually not made until the disease is well advanced. For example, it frequently occurs that a patient with a beginning renal tuberculosis will complain of subjective symptoms referable to the bladder, *viz.*, frequent urination, pain and tenesmus at the end of the act, and yet have no vesical or prostatic lesion. The only objective symptom is a slight pyuria with or without hematuria and the latter is often overlooked. Such a case is treated for inflammatory disease of the posterior urethra, or for a cystitis—calculus is often suspected. The patient is subjected to frequent and often unnecessarily severe instrumentation for the purpose of reaching a diagnosis or in the course of treatment, and it is only after repeated examinations have failed to show any lesion of the bladder or of the prostate and after local treatment has failed not only to relieve the patient's condition, but has made him worse, that the possibility of tuberculosis being present begins to be considered. Unfortunately for the patient, as the result of delay and improper treatment, the tuberculous process has spread from the kidney to other portions of the urinary or genital tract, and the favorable opportunity for surgical relief has passed away. The statement may well be emphasized that unnecessary and frequent instrumentation is a fruitful exciting cause for the extension of the tuberculous process in the urinary tract by producing trauma favoring infection, and weakening the resistance.

I believe that it is of the utmost importance in all cases of chronic inflammatory urinary disease, in which the nature of the disease is not perfectly clear, that as a matter of routine practice the urine should be frequently and carefully examined for the presence of tubercle bacilli and that even when tubercle bacilli cannot be found the possibility of tuberculosis should be kept constantly in mind. It has been frequently said that the presence of tubercle bacilli in the urine is difficult to find. This undoubtedly is true in some cases of tuberculosis, especially where but few bacilli are present. I cannot at the present time enter into a detailed description of the best methods for examining urine to determine the presence of this bacillus. I can, however, say as the result of personal experience that the failure to detect tubercle bacilli is more often due to the mode of examination than is usually supposed. The best results can be obtained only when the urine is examined immediately after it has been

voided by the patient. The sediment should be collected by centrifuge and slides should be prepared at once. The examination of urine after the specimen has stood for a number of hours and from which the sediment has been collected simply by gravity rarely gives satisfactory results unless a large number of bacilli are present.

In addition to the improvements made in our methods of urinary examination, our ability to make a positive diagnosis has been greatly increased by improvements in the cystoscope and in the facility with which in practised hands this instrument and ureteral catheterism can be employed. In the early stages of tuberculosis direct inspection of the bladder and orifice of the ureter is of great value, and when the conditions are favorable for catheterizing the ureters we can determine the condition of either kidney with great accuracy. Unfortunately, in many cases of advanced disease cystoscopy is impossible, and I am inclined to think that except in skilful hands the practice of cystoscopy and ureteral catheterism does more harm than good.

The result of any operation upon the urogenital tract for tuberculosis is governed by the same rules which we apply to other surgical diseases. The immediate result of any operation will depend upon the general condition of the patient, upon the state of the lungs, and of other organs, upon the age of the patient and the extent and seat of the disease.

Operations upon the Kidney.—Operations for tuberculosis of the kidney may be divided into three classes: (1) Operations in those cases in which the kidney is primarily affected and in which the diagnosis of urinary tuberculosis has been made while the infection is purely bacillary; (2) operations in cases in which the tuberculosis is primarily in the kidney and in which there is a mixed infection, but without tuberculous disease in any other portion of the urinary tract; (3) those cases of advanced tuberculosis of the kidney with secondary tuberculosis of other portions of the urinary tract. I believe that in all cases of tuberculosis of the kidney in which an operation is not absolutely contraindicated by the general condition of the patient, surgical interference is not only justifiable, but is imperatively demanded. The results of operation, however, will vary within very wide limits, and at the present time it is impossible to generalize in regard to the prognosis of any of the three classes of cases mentioned above. As a general rule when operation upon the kidney for tuberculosis is indicated the choice should be given to nephrectomy.¹ Recent statistics show that the immediate mortality of nephrectomy and nephrotomy is about equal, but the remote results are greatly in favor of nephrectomy. We find that 61.71 per cent. of cases died during the first year after nephrotomy, while only 12.54 per cent. died during the first year after nephrectomy. Of 63 cases operated upon by nephrotomy 39 died during the first year, and of the 24 that survived all had permanent fistulae. Of 335

cases operated upon by nephrectomy 42 died during the first year by a spread of the tuberculous process to other organs. Of the 293 which survived the operation 33 were living at the end of the first year, 41 lived three years, 4 lived five years, 7 lived six years, and 2 lived eight years. A very small proportion of these cases suffered from fistula, namely 7 in 105 operations. It would seem, therefore, that nephrectomy should always be the operation of choice where only one kidney is affected, and I believe that the operation is frequently indicated even when the other kidney is the seat of beginning tuberculous infection, if the patient be put in surgical condition. The question has been frequently discussed as to the necessity of removing the ureter in cases of nephrectomy performed for tuberculosis. To do this increases the risk of the operation and frequently, I believe, subjects the patient to unnecessary risk.

In early cases of renal tuberculosis the upper part of the ureter is alone affected. In advanced cases in which the entire ureter is involved the operation upon the kidney is only palliative; and to remove the kidney simply increases the risk of the operation without doing any permanent good.

Tuberculosis of the Genital Tract.—Primary tuberculous infection of the genital tract may begin in the epididymis, or in the prostate, or possibly in the seminal vesicles; the primary involvement of the latter is very doubtful. The genital tract may also be involved secondarily as the result of tuberculosis of some portion of the urinary tract. Tuberculosis as a primary infection of the genital tract attacks most frequently the epididymis, but I believe that the prostate is more frequently the seat of tuberculosis than is usually supposed. Tuberculosis of the seminal vesicle is, I believe, nearly always secondary to tuberculosis of the epididymis or of the prostate. The spermatic ducts, or vasa deferentia, are never primarily infected by the tubercle bacilli. In these canals the disease is always secondary either to tuberculosis of the epididymis or of the prostate. If these statements are true it is apparent how important is an early and accurate diagnosis of the exact seat of the lesion in determining the extent of an operation.

Cases of genital tuberculosis may be generally classified into three groups: First, when the epididymis is the seat of primary disease and when the disease is limited to this part; second, when the epididymis is involved as the result of a descending infection from the prostate, but without involvement of the seminal canal; third, when the testis proper, as well as the epididymis, is involved, and in such cases the seminal canal is always more or less the seat of tuberculous diseases.

It would be impossible at the present time for me to discuss at all fully this question of operations upon the genital tract for it is the subject of active discussion among all those interested

in genito-urinary surgery. Opinions of the most competent of observers differ so widely upon this subject that I am forced to give only my own opinion, which is based upon a large clinical experience. The principal questions at issue may be formulated as follows: (1) Is castration indicated in every tuberculous condition of the epididymis, or can we by more conservative methods accomplish the same results? (2) When the epididymis or testicle alone is involved is it necessary for us to remove the seminal canals and seminal vesicles and portions of the prostate, even if these latter do not appear at the time to be the seat of disease? At present I am very strongly of the opinion that when the epididymis is the seat of primary disease, and even in cases where there is some involvement of the prostate, if the testicle itself be healthy a conservative operation will give as good results as castration. Excision of the epididymis, together with as much of the seminal canal as seems to be diseased is, I believe, the operation of choice in early cases. It is possible by opening the inguinal canal to remove the seminal canal nearly as far as its junction with the duct of the seminal vesicle. And I believe that when the epididymis or a testicle has to be removed for tuberculosis it is best to remove as much of the seminal duct as can be done through this incision. When the testicle proper is the seat of a tuberculous process conservative measures are useless and castration with the removal at the same time of the seminal canal is the only operation to be considered. In such cases the prognosis is usually bad as to ultimate cure, and the operation can only be considered as a palliative measure. The value of more extensive operations upon the genital tract, which aim not only to remove the diseased testes and cord, but also the seminal vesicles and more or less of the prostate, are now under consideration. I think that my own is in accord with those who have had much experience with these operations. They are difficult to perform and the results which follow such surgical interference have been far from satisfactory.

Tuberculosis of the Prostate.—Primary tuberculosis of the prostate has been denied by many very competent observers. The statement by Sir Henry Thompson that the prostate was never the seat of primary tuberculosis has been accepted and, I believe, still influences the thought of the present time. I am convinced that primary tuberculosis of the prostate does occur and is far from infrequent. It is difficult to diagnose, and, as a rule, the tuberculous process has extended from the prostate to other portions of the genital or urinary tract before the diagnosis is made. It is frequently possible by pressure upon the prostate with the finger introduced into the rectum to obtain the secretion from the prostatic follicles, which, upon examination, will be found to contain tubercle bacilli when repeated examinations of the urine have been negative. Except in cases of isolated tuberculous

nodules in the prostate, or in cases in which such nodules have broken down and have resulted in so-called tuberculous prostatic abscesses, there is little that we can do with certainty for the disease in this organ. I am strongly of the opinion that in a large number of cases of slow developing abscess of the prostate the cause of the condition when carefully sought for will be found to be tuberculosis. In such cases I believe that the proper course to pursue is to remove as completely as possible the diseased portion of the prostate, and I am sure that in many cases this can be done with great benefit to the patient.

Tuberculosis of the Bladder.—As I have already stated tuberculosis of the bladder is, I believe, always secondary either to tuberculosis of the kidney or of the lower uro-genital tract. It is, of course, possible that the bladder may be primarily infected, but clinical experience and the results of post-mortem examinations show that this rarely occurs. The surgical treatment, therefore, of bladder tuberculosis can never be curative and must be regarded only as a palliative measure unless the original seat of the tuberculous infection can also be removed. Local treatment of tuberculosis of the bladder is, I believe, absolutely valueless. When the bladder is involved by a tuberculous process, and the condition is complicated by some form of pus infection, local treatment may give some relief by controlling the latter, but each treatment has no effect upon the progress of the tuberculosis. There are few conditions met with by the surgeon in which he can do so little as he can to relieve the symptoms resulting from tuberculous infection of the bladder. It may be possible at times by opening the bladder to apply local treatment more effectually and subsequently, by draining of the viscus, to relieve suffering, but the cases in which relief has been given are very few, compared with those in which no good has been accomplished by operation and in many of these the condition of the patient has been rendered worse. I believe that the reason for failure to accomplish more by surgical means in tuberculosis of the bladder is the fact that when the bladder has become involved the disease in other parts of the uro-genital tract has progressed too far to warrant any surgical interference.

It has been possible in the time at my disposal to present very imperfectly only a few points in regard to uro-genital tuberculosis, and these have been presented more for the purpose of suggesting the extent of the subject than of answering the many questions which are met with by every investigator in this department of pathology. There are but few of these questions to which we can at present give positive answer, and there are few fields of scientific research which have been so little explored. I hope that the observations which I have made may at least be suggestive, and may possibly stimulate others to enter this field of research.

¹ Rapport sur la valeur de l'intervention chirurgicale dans la tuberculose rénale par M. Ponsson (de Bordeaux). "Ann. des Mal. des Organ. Genito-Urin.," Vol. xviii, 1900.

PROGRESSIVE PERNICIOUS ANEMIA.

By ALFRED STENGEL, M.D.,

OF PHILADELPHIA;

PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.

WITHIN the limits of this discussion, I cannot hope to consider in every detail the subject that has been assigned to me. Fortunately, there are certain aspects of this question which at the present day require no discussion, being so universally recognized as to be matters of common knowledge. For example, the symptomatology of the disease is so uniform that little has been added to the knowledge of it since the earliest descriptions of Addison. Practically the only exceptions of consequence are the minuter knowledge of the gastric manifestations, the recognition of certain intra-ocular signs and symptoms, and the group of nervous manifestations referable to the peripheral nerves and spinal cord that have been lately studied.

If, however, the symptomatology of the disease is well known, the etiology, the pathology, and the diagnosis are still grounds of dispute and uncertainty, and even the definition requires careful consideration.

What shall be considered as a practical definition of this disease? Addison regarded it as a form of progressive anemia without definite cause, and Biermer practically agreed with him. At the present time the majority of observers are disposed to include in the category of pernicious anemia cases which are not progressive in character, but, on the contrary, are distinctly relapsing, and cases in which the etiology is more or less clear. Looking at the subject from another point of view, it may be recalled that some years ago the disease was described as primary when it was thought that the essential feature was a disturbance of the blood-making organs, as the result of which the integrity of the blood suffered deterioration. In view of the observations of Quincke, Hunter and others, this view is untenable, and the abnormal condition of the bone-marrow, first discovered by Pepper in 1872 and since regarded as the most constant lesion of the disease, is quite generally looked upon as secondary and not characteristic. It is known that in all forms of destruction of the blood, the bone-marrow and the other lymphadenoid tissues hypertrophy in the attempt to compensate for the loss of corpuscles. This leads to the production of new blood cells, more or less immature, and it has been the view of many that the processes in the bone-marrow in pernicious anemia, while perhaps more active and at the same time productive of less mature corpuscles, because more rapidly evolved, are otherwise identical with the processes that occur in all forms of cachexia in which the bone-marrow is called upon to increase its normal activity. Ehrlich and some of his pupils have maintained, on the contrary, that there is a distinct form of activity in the marrow

² Read at the seventeenth annual meeting of the New York State Medical Association, held in New York, October 15, 16, 17, 18, 1900.

in pernicious anemia to which he would give the term megaloblastic, and that this does not occur in other forms of anemia or cachexia. The only answer that can be made to this is that Ehrlich's view rests upon no scientific demonstration excepting that a certain form of nucleated red cell is common in pernicious anemia and rare in other forms of anemia or cachexia.

In the light of our present evidence, it is certain that the disease under discussion results from rapid destruction of red blood-corpuscles for which the blood-making functions do not suffice to compensate. Moreover, it is practically settled that the source of the hemolytic agents is the gastrointestinal tract. In the case of pernicious anemia resulting from the presence of *bothriocephalus latus* in the intestines or from invasion of this tract by other parasites, there is certainly little doubt of the operation of toxic agents; while in more obscure cases the discovery of atrophic conditions of the mucosa, ulcerations, or cancer, makes it seem likely that similar poisons are generated and occasion the blood-destruction that initiates the disease. If these considerations are admitted, and it may be said with little reservation that they are established, pernicious anemia is a secondary condition and not a disease. It remains, however, to note this important fact: Not every subject having *bothriocephalus* in his intestines develops pernicious anemia, and the disease does not invariably follow upon the grave gastrointestinal conditions alluded to. It is possible that in certain cases a special sort of infection may be superadded to the primary conditions or that the hemogenetic function of the bone-marrow in certain persons is deficient or perverted. The latter seems to me the more likely view because, in the first place, no definite proof of a coincident infection has been discovered, and, in the second place, the characters of the blood in pernicious anemia suggest a profound disturbance of hemogenesis.

There are still a few authorities who believe or assert that pernicious anemia is a primary disease and that there is no such thing as secondary pernicious anemia. The evidence in favor of this position is entirely negative and wholly inadequate. A careful review of established facts warrants no other conclusion than that which I had occasion to state in a paper on the "Treatment of Pernicious Anemia" in 1896 in the following words: "As far as our knowledge of the disease extends to-day, it is but a symptomatic disorder of the blood and not a disease in the strict sense. It matters not whether a cause is discovered or not; whether there be gastrointestinal lesions, parasites in the intestines, pregnancy or parturition, or no discoverable cause, the resulting condition of the blood, the symptoms, the course and tendency to fatal termination, and the general post-mortem lesions are the same, and I can therefore see no justification for setting apart a group of cases as true Addisonian pernicious anemia, and calling all those in which causes are found severe secondary anemia."

Practically, the same view is expressed by Ehrlich in his monograph published in 1900 (Ehrlich & Lazarus, Nothnagel's Series) in these words: "We must, however, always remember that we are not dealing with a disease *sui generis*, but with a frequently recurring symptom-complex which may accompany a variety of diseases." In consequence of these views it is necessary to look upon pernicious anemia as a secondary disorder with a characteristic clinical course and with certain peculiar blood changes.

I may not consume time by detailing the clinical features of the disease, but will refer only to a quotation from Addison's monograph to which Pepper first alluded in his important paper published in 1872. Addison says: "For a long period I had from time to time met with a very remarkable form of general anemia occurring without any discoverable cause whatever—cases in which there had been no previous loss of blood, no exhausting diarrhea, no chlorosis, no purpura, no renal, splenic, miasmatic, glandular, strumous or malignant disease." And further on: "It makes its approach in so slow and insidious a manner that the patient can hardly fix a date to the earliest feeling of that languor which is shortly to become so extreme. The countenance gets pale, the whites of the eyes become pearly, the general frame flabby rather than wasted, the pulse perhaps large, but remarkably soft and compressible, and occasionally with a slight jerk, especially under the slightest excitement. There is an increasing indisposition to exertion, with an uncomfortable feeling of faintness or breathlessness on attempting it; the heart is readily made to palpitate; the whole surface of the body presents a blanched, smooth and waxy appearance; the lips, tongue and gums seem bloodless, the flabbiness of the solids increases, the appetite fails, extreme languor and faintness supervene; breathlessness and palpitations are produced by the most trifling exertion or emotion; some slight edema is probably perceived about the ankles; the debility becomes extreme, the patient can no longer rise from bed, the mind occasionally wanders, he falls into a prostrate and half-torpid state, and at length expires; nevertheless, to the very last, and after a sickness of several months' duration, the bulkiness of the general frame and the amount of obesity often present a most striking contrast to the failure and exhaustion observable in every other respect." It must be added to this description that irregular and occasionally continued fever is a frequent symptom, that gastric and intestinal symptoms, such as vomiting and diarrhea, are common, and that ophthalmic examinations usually reveal hemorrhages in the retina. With these brief statements, I must leave the subject of symptomatology to proceed with that of the hematological features.

Examination of the blood discloses several more or less characteristic abnormalities: (1) The number of red blood-corpuscles is reduced below the number seen in any other condition;

(2) the red corpuscles present varied and marked alterations of shape, size, character, and staining relations; (3) the hemoglobin, while greatly reduced in amount, is often in excess relatively to the number of the corpuscles and is very rarely diminished more than the corpuscles, the "globular richesse" of Hayem therefore being usually at par or plus and very rarely much below par; (4) the total number of leucocytes is usually reduced and the mononuclear elements, especially the smaller forms, are nearly always relatively more numerous than the polymorphous cells or, in other words, the total leucocytic reduction occurs at the expense of the polymorphous leucocytes.

Let me now refer in detail, but briefly, to some of these facts: The number of red corpuscles and the percentage of hemoglobin have been regarded as most essential factors in diagnosis by Hayem and Laache, while Ehrlich has sought to minimize their importance as compared with his own methods of morphological study of the cells. A strictly impartial student must admit that a continuation of the two methods is necessary to a certain diagnosis. I have seen a few cases in which a sole reliance upon the enumeration of the red cells and the estimation of the hemoglobin would have led to erroneous conclusions, and have, on the other hand, found some in which the morphological diagnosis would have been uncertain. As a result of my experience, I would conclude that there are very few cases, if any, of conditions other than pernicious anemia in which the number of corpuscles is below 1,500,000 and the hemoglobin approximately equal in percentage to that of the corpuscles. There are cases of cancerous cachexia and post-hemorrhagic anemia in which such profound reduction of the number of corpuscles does occur, but in these the amount of hemoglobin is reduced to even greater degrees. Looking at the other side of the question, we may regard as fairly established the following facts: (1) Poikilocytosis reaches its highest grades in pernicious anemia; (2) macrocytes and an average excess in size of the red corpuscles are more common in this than in any other disease; (3) polychromatophilia and macrocytosis are more striking in this disease than in any other; (4) megaloblasts are more abundant and more regularly present in pernicious anemia than in other forms of anemia; and (5) a combination of all these factors practically assures the diagnosis. It cannot, however, be asserted that any one of these conditions makes the diagnosis certain, and it is no longer regarded as proper to establish the diagnosis upon any one of these factors with the possible exception of the presence of megaloblasts. Ehrlich states that the "positive demonstration of undoubted megaloblasts in combination with the presence in abundance of megalocytes is indicative of pernicious anemia, since these conditions proclaim without question that the embryonal type of blood-formation has superseded the adult variety, even if but limited areas of the marrow are so

affected." This statement is singularly elastic. Its acceptance requires agreement upon the question of what constitutes an "undoubted" (unzweifelhaft) megaloblast, and what must be regarded as "abundance" (reichlicherem Auftreten) of megalocytes. Taking it, however, at its most rigid interpretation the statement is erroneous. I have seen two cases of leukemia which during an interval of aleucocytosis must have been regarded as instances of pernicious anemia according to Ehrlich's view, and several other cases of profound anemia in childhood would have been similarly diagnosed. Of course, I am prepared to admit that Ehrlich's statement may be accepted for the great majority of cases, but would insist that the exceptions be admitted and the statement be less dogmatic.

In less definite fashion, Ehrlich, and those who have followed him, would make it appear that a preponderance of large red corpuscles (megalocytes) and the predominance of megaloblasts, when there are both normoblasts and megaloblasts, are necessary conditions to establish the diagnosis of pernicious anemia. This view also seems to me unwarranted. I have seen cases of what in every other respect must have been regarded as progressive pernicious anemia (and one at least in which autopsy confirmed the diagnosis) in which during the entire clinical course of the disease repeated examinations had discovered abundant normoblasts with comparatively few megaloblasts. It must be remembered in connection with this statement that the definition of a megaloblast is uncertain and that the criterion by which Ehrlich has sought to classify the erythroblast, namely, the size and morphological properties of the nucleus, is not admitted by others. According to this mode of differentiation many of the cells which I have habitually regarded as normoblasts would naturally fall into Ehrlich's group of megaloblasts. It is difficult on this account to reach any practical conclusions as to the validity of his views, but it is certain that in the cases to which I have alluded normoblasts outnumbered megaloblasts, even with the strictest interpretation of Ehrlich's definition.

For my own part, I do not pretend to arrive at the diagnosis of this disease by any one condition or by any limited number of conditions. It is as necessary in the case of pernicious anemia as in that of any other systematic disorder to take into account the clinical course and history as well as the results of special laboratory investigations. There is a disposition in some quarters to withhold the diagnosis of pernicious anemia, except in such cases as present the blood-count of a most extreme anemia, while, on the other hand, some others are inclined to make the diagnosis when the blood-count and the general condition of the patient are seemingly but slightly affected and when few large megalocytes and possibly megaloblasts have been discovered. Neither of these methods of diagnosis seems to me judicious. Pernicious anemia can undoubt-

edly be recognized at stages prior to the extreme reduction in the number of corpuscles and when the patient is still in a comparatively good state of health, and, in some instances, during intervals of apparent cure the blood-picture and the physical examination reveal sufficient evidence to justify the diagnosis, although the patient is then seen for the first time. While this is true, I believe that it is unwise to hazard the diagnosis in cases in which the blood-count is but slightly altered merely upon the discovery of a few abnormal cells, even of such cells as I have referred to—megaloblasts. I am inclined to stand upon the opinion I expressed in a paper on "Nature and Diagnosis of the Disease," read before the Philadelphia County Medical Society in May, 1894, and I would quote from that paper as follows:

"My own observation leads me to regard as pernicious anemia any case presenting suspicious clinical features in which the red corpuscles number less than 1,500,000 per cubic millimeter, and in which the hemoglobin shows about the same proportionate reduction. The diagnosis becomes certain in cases in which the hemoglobin is relatively in excess, and in which great alteration in the size and shape of the red corpuscles and the presence of large nucleated red corpuscles are observed. In addition to these characters of the blood, pernicious anemia presents a train of clinical manifestations scarcely to be mistaken when present in their typical form."

I cannot dwell further upon the matter of diagnosis and wish now to pass on to some considerations regarding prognosis. I have not seen a patient with pernicious anemia who has been cured. I doubt the diagnosis in the case of Hayem, the only one in the literature which may, according to Ehrlich, be looked upon as one of permanent cure of the disease. One of my cases has been under my observation since 1892 and is still in good health. Several other cases in my experience have remained in fair health for as much as four or five years, but I have never seen nor known of a case in which it could be reasonably supposed that the disease was cured.

While the prognosis *quoad vitam* is hopeless, the outlook *quoad valetudinem* is often quite hopeful. Many cases of pernicious anemia may improve spontaneously from time to time, and the intervals of comparative freedom from discomfort may be as long as several months or even a year or more. Medicinal treatment unquestionably aids in securing this favorable outcome and when a period of improvement has set in, the continued use of proper remedies secures for the patient the continuance of his favorable condition.

No case of this disease is sufficiently serious to warrant a hopeless feeling regarding its treatment. I have several times seen temporary recovery take place when the patient was reduced to the last point of anemia, was comatose and unable to take or retain food.

I wish to say one word here regarding the alterations in the blood-count. I am aware that certain authors have reported remarkable, sudden improvements in the character of the blood. It is not reasonable to suppose that these are due to sudden formation of large numbers of red corpuscles; on the contrary, the probable explanation is found in the assumption of an alteration in the distribution of the corpuscles or a reduction in the quantity of serum. Some have referred to the improvement in the blood after attacks of diarrhea. It is entirely conceivable that such increase in the number of the corpuscles may be the result of inspissation of the blood through a loss of serum. Even the character of the corpuscles may have changed and the cells may assume a more normal appearance. This, however, may also result from a thicker, more normal condition of the serum. Improvements in the character of the blood to fairly normal conditions may, however, actually occur from a restoration of the hemogenetic function, but such improvements are recognized as more settled by their persistent progressive character.

TREATMENT OF TYPHOID FEVER.¹

By STEPHEN SMITH BURT, A.M., M.D.,
OF NEW YORK;

PROFESSOR OF PHYSICAL DIAGNOSIS AND CLINICAL MEDICINE IN THE
NEW YORK POST-GRADUATE MEDICAL SCHOOL.

INASMUCH as the personal equation cannot be eliminated from a patient with typhoid fever, all stereotyped methods of treatment are open to criticism, and although it will always be typhoid fever, the affection varies with the individual and the environment, and great are these variations. We have to consider carefully the fundamental power of resistance, as well as to estimate the probable extent of the infection. We have to deal with the peculiarities of constitution or temperament of each patient, equally with the disease, and to be guided by his idiosyncrasies. Consequently we must treat the individual who has the typhoid fever rather than the typhoid fever to the exclusion of other considerations.

There are several important principles regarding the management of this disease. The patient must be put to bed at once and there be kept until an advanced period of convalescence; this is of the utmost importance. Those victims of the disease who struggle against fate, and go about for a week or ten days, are very prone to a fatal termination; and those who by any mischance get out of their beds are greatly in danger of death in various ways. One young man who continued to keep up and to attend to his daily duties well into the second week of typhoid fever, despite many ominous warnings, died of intestinal hemorrhages within eight days after he finally took to his bed. An acquaintance of mine allowed his patient to travel several hundred miles at the beginning of an attack, in order

¹ Read before the Newport (R. I.) Medical Society, July 17, 1900.

to reach home, and this error in judgment resulted fatally as might have been expected. A young boy who got out of bed and walked to the end of the ward in a semi-delirium during the absence of the nurse, some years ago at Roosevelt Hospital, fell and died of a ruptured spleen. Sometimes toward the end of the fever, when the heart is at its lowest ebb, there will be a collapse from a premature attempt to assume the upright position.

The food must be of a nature that can be easily assimilated, and that will not irritate the intestinal tract by the coarseness of what remains to be excreted. While there is a difference of opinion as to what is the most judicious kind of food, my experience and possibly my prejudices strongly incline me to a fluid dietary. Certainly too much solid nutriment has been the cause of death. I recall a painful example of the sudden death of a patient who was well on the road to recovery, and who was surreptitiously given some grapes to eat by a well-meaning but inconsiderate friend. Water should be freely administered; it undoubtedly flushes the tissues and assists elimination. Fresh air must be provided in abundance, for it supplies the waste-matter in the pulmonary circulation with a means of oxidation. And now we have reached a point where it is a question what further should be done in addition to the regular routine nursing. Simplicity should be our aim in the management of typhoid fever. In fact, the more a physician departs from this standard the farther he is apt to be removed from a high order of intelligence. The mild cases will recover without any medication.

The malignant infections commonly will result in death in spite of all treatment, while those that occupy an intermediate position will often be saved through well-designed measures. Possibly some of the very best results can be shown in the entire absence of medication, but I should not consider it wise to advocate, to the exclusion of all else, the expectant treatment. Nor can it be called strictly scientific to undertake to force this, that, or the other exclusive method upon the profession. For a working hypothesis it is well to assume that Nature performs the greater part of the recuperative process, and that the less meddling the better, barring accidents. When the patient has been placed under the conditions already discussed, he occupies a position somewhat analogous to one who has had a broken limb reset and placed in splints. The knitting is done by a natural process, if it is done at all, and not by the surgeon.

About ten years ago, in a paper on the "Prevention and Treatment of Typhoid Fever," which was read by me before the Medical Society of the State of New York, I quoted from Flint's Practice of Medicine the death-rate of 307 cases treated by Dr. Cotting of Boston without drugs of any kind. It was ten per cent. I likewise referred to the 250 cases of typhus fever treated at Bellevue Hospital by Alonzo Clark. At this

time there were as many more cases under the care of his colleagues, and among these there was a great mortality. "Although it was winter, the windows were removed, stoves were placed before the open spaces to warm the incoming air, and, except for moderate stimulation, no medicine was given. Not one of the 250 cases died, and in two weeks they were convalescent." In acknowledging the receipt of a reprint of my paper, the late Dr. William Halle Walshe of London said, apropos of these statistics, that having been a student of the great Louis, in Paris, he had always taken a deep interest in the subject of typhoid fever, and that at one time he made an investigation of the mortality of all the principal hospitals in Europe and found by far the best results were obtained at the Hotel Dieu, in Paris, where the death-rate was only 5 per cent. and the treatment was entirely without medication. What is more, Dr. Walshe did me the honor of telling me that he was wholly in accord with my views on this vital subject.

Students now and then ask for an opinion of the merits of the so-termed Woodbridge method of treating typhoid fever. It is reported that during the Spanish war a board of medical officers at Fort Meyer Hospital found in 57 cases treated by Woodbridge himself, and he was afforded every facility for the experiment, the mortality was 10 per cent., while of all cases treated otherwise it was but 7 per cent. There were in all about 600 cases treated at this time.

The question is sometimes asked me, "Do you pursue the alcohol treatment?" To which of course I reply that alcohol is used when it is required. My belief is, however, that often alcohol is much more freely and extensively used than is necessary. Once there were three cases being treated in the same ward of a hospital with which I was connected, whereof one was taking no stimulant, one was taking a little wine, and another needed and received the best part of a quart of whiskey every twenty-four hours for over two months; all recovered. In the '70's there was a time when the tub-bath, which has recently been much in evidence, was quite extensively employed. There was a patient in my hospital with a temperature ranging from 104° to 105° F., and a pulse running along at 60 per minute; his legs and arms as well as his body were covered with a rose-colored eruption. He was systematically tubbed, but he died nevertheless. The conclusions drawn from that and many other trials of the system have since inclined me to considerable caution in my selection of candidates for this kind of treatment.

The temperature does not disturb me as much as the nervous symptoms, which are a better index of the gravity of the situation, and there seems to be nothing so soothing to meet these conditions as some form of cold-water application. But it need seldom be an actual tub-bath. Anything that puts such a strain upon a patient as to require free stimulation in consequence had better not be employed indiscriminately.

inately. A sponge-bath of one-third alcohol and two-thirds cold water thoroughly carried out, in the majority of instances, will accomplish the desired results with considerably less expenditure of strength on the part of the patient. If this is not sufficient a more copious application of water, called the slush-bath, may be employed. And then there is the wet pack together with the sprinkler. Some cases, however, will have high fever and practically no nervous symptoms, and their condition may never become very alarming.

Many years ago I advanced the proposition that fever is probably a conservative process and that while it remains within bounds it should not be the object of much solicitation. It is owing to our ignorance of this matter that we have been guilty, in times not long past, of so much meddlesome interference. The thermometer has its uses and is invaluable, yet it becomes dangerous in the hands of those who are unable rightly to interpret its revelations. In all my experience I have never been open to the charge of ordering a dose of antipyrin, or its congeners as an antipyretic in typhoid fever. My last patient has just recovered after a six-weeks' illness. His temperature during the second week rose to 104° F., and once, in the early morning, strange to say, it reached 105° F. His blood reacted quickly to the Widal test. Rose-colored spots appeared in crops upon his arms, legs and body, in profusion. Still, his pulse remained good and there were no nervous symptoms. His only medication, some dilute sulphuric acid, and a little calomel on the first day, might easily have been omitted. The rest of the treatment consisted in cold sponge-baths every two hours as long as his temperature remained above 102.4° F., which it continued to do for a short period to the contrary notwithstanding. In my opinion the safest intestinal antiseptic remedies, if any are to be tried, are mild laxatives. And for moving the bowels ordinarily a rectal injection. One of the worst cases of hemorrhage that I have encountered was treated successfully by ice to the abdomen and quarter-grain doses of powdered opium every fifteen minutes until controlled. There were three separate copious hemorrhages. When the bowels move more than three or four times in twenty-four hours, subnitrate of bismuth in large doses, alone or with small doses of morphine, will often be all that is required. Strychnine, ammonia, alcohol, and ether are the supporting remedies to be relied on when indicated. We must be guided by our estimate of the condition of the patient's muscular system, including the heart, as to how much he shall be allowed to do when the fever has gone and when the time comes for getting up. In my opinion he should be kept on a soft diet for a week or ten days. At all events, we must feel our way, always leaning to the side of caution in relation to his regimen in those dangerous and trying days of the patient's convalescence.

INCREASING THE THERAPEUTIC VALUE OF COD-LIVER OIL BY THE ADDITION OF FREE IODINE AND FREE PHOSPHORUS.*

By LOUIS J. LAUTENBACH, A.M., M.D., Ph.D.,
OF PHILADELPHIA;

SURGEON-IN-CHARGE OF THE PHILADELPHIA EYE, EAR, NOSE AND THROAT INSTITUTE; NOSE AND THROAT PHYSICIAN TO THE ODD FELLOWS' HOME; LATE CHIEF OF EYE CLINIC OF THE GERMAN HOSPITAL.

COD-LIVER oil, the oil of the liver of the *Gadus morrhua*, has been a much used remedy for rheumatism, scrofulous and wasting diseases for centuries, but only within the past century has it become a standard remedy with the medical profession. Many have been the preparations introduced as substitutes, but nevertheless it still stands preeminent and really alone in its special field—a field which in our opinion cannot be said to be entirely dependent upon the fatty ingredients of the oil, nor upon its halogen constituents, nor upon its nerve-building property.

The purposes of this paper are to compare the modern cod-liver oil with the cod-liver oils of the time prior to 1853 and to discuss the seeming relative loss in therapeutic action of the newer oils, and also to endeavor to explain the cause of this loss as well as a means for overcoming it. When the Iclander or the Norwegian of the long ago went fishing for cod he brought in his catch, packed the livers in barrels and headed up the barrels. He continued doing this all the season, which usually lasted for about three months. After the season was over he opened the barrels and skimmed off the floating oil. Of course by this time, even in those cold regions, the livers were in an advanced stage of decomposition. This oil was the best oil of those days and was usually a light yellow color and known as raw medicinal oil. By continuing this process more oil, but of a darker shade of color, was obtained and this was known as *pale oil*. Later on when the putrefaction became further advanced the oil became a browner color, and this oil, called *light-brown oil*, was drawn off and kept separate from the former. When no more oil could be squeezed out, the residue was heated in a cauldron far beyond the boiling-point and the oil thus obtained was known as *brown oil* and was rarely used medicinally, being employed in the arts, especially for tanning processes, etc. Indeed, even the variety known as the *light-brown oil* was often rejected for internal medicinal purposes. Of the above-mentioned varieties of oil all were contaminated by the putrefactive process. Only one variety—the brown oil—was subjected to the influences of heat.

Since the introduction of the Möller¹ steam process in 1853 the method of obtaining the oil has all been changed. As the oil is prepared today in Norway, at the celebrated fishing grounds of Lofoten and Romsdalen, the livers are taken usually within six or eight hours after the cod has been caught and subjected to this process.

* Read before the Section on Therapeutics and Materia Medica of the American Medical Association, Atlantic City, N. J., June 5-8, 1908.

At both these places the fishing season extends from January to April, and as the thermometer then generally registers below freezing, there is no chance for decomposition to occur between the catch and the preparation of the oil. At the fisheries of Newfoundland and Massachusetts and at those on the Shetland Islands and the Eastern coast of Scotland, as well as those on the coast of Russia and in Iceland, the fisheries being carried on at a considerable distance from the land, and at the two places first mentioned during the hot season, it necessarily follows that putrefaction must occur before the oil is prepared.

By the steam process the livers are heated over a large water-bath, or in jacketed cauldrons, or, when the process is carried on aboard ship, in an open inverted cone of wood, the purpose being to relieve the livers of all the contained oil by means of a temperature not above 180° F. To-day the old processes have been supplanted by this steam process.

With reference to the normal composition of the oil of to-day, no one has given the subject a more thorough study than F. Peckel Möller, who has published a work of some 492 pages, the index of which contains nearly 3000 titles. It is considered by far the most complete exposition of the subject that has ever been presented.

By a study of this and of the other chemical researches on the subject, we are at once convinced that we are dealing with a most complex organic body containing, one might almost say, numberless constituents. Möller classified the components of cod-liver oil as follows: Hydrocarbons; oxygen compounds; combinations of oxygen compounds; oxygen cyclo-compounds; halogen compounds; sulphur compounds; nitrogen compounds; proteids; ptomains and leucomains; toxins and antitoxins; ferments. The oil which he studied is one peculiarly free from putrefactive compounds, on account of being made at once from the fresh livers, and is peculiarly free from adulterations such as might arise from the use of the livers of other fish, as in the Norwegian waters during the cod season practically no other fish exist. The cod abound and destroy all the other fish, whereas, in the Newfoundland, Massachusetts, Scotland and Russian fisheries the cod, the pike, the haddock, the ling, the whiting, and many others, even the shark, are frequently caught and their livers are probably used in the preparation of the oil. How much more complicated may be the chemical composition of such a mixture, especially when subjected to the usual putrefactive processes, I know not.

As to what may be the active principle or principles of this complex body there has been much discussion, and we seem to be as far from a satisfactory solution as half a century ago. At various times various ingredients have been so designated, in their turn the title has been given to the supposed alkaloids, to the morrhual, the iodine and bromine, to the trimethylamine, to the

contained fat, to the phosphorus, as well as to many other of its constituents. No doubt it has no single body which can represent the sum total of its activities, but must be considered as a complex organic body whose therapeutic effects, while evident, are yet withal a multiple action.

The therapeutic virtues of cod-liver oil are within certain lines peculiar to itself. Its effects on patients with struma, scrofula, tuberculosis, syphilis, rheumatism, gout, rachitic and nervous affections, as well as on sufferers from wasting diseases, are marked and typical; no other agent producing exactly the same effects, no other or combination of oils or of other constituents bringing about the same general results. Its alterative, tissue-building and tissue-repairing, as well as general nourishing qualities are marvelous, but as to just how these results are brought about we can but theorize.

In partial explanation of its action is the fact that in the case of no other known oil are osmosis and endosmosis so rapid. It is emulsified more rapidly than any other known fat in the presence of pancreatic juice and glycerin without any gum. It is thus more easily digested than any other known oil and possesses, therefore, greater nutrient qualities. If this were all of its beneficial properties it would in its sphere be without a peer, but when, in addition to the nutrient and digestive function, we observe its prompt alterative effects, we must be convinced that we are dealing with a therapeutic agent which, while not thoroughly understood, has for ages been of incalculable value to the human race and one whose virtues can probably never be thoroughly explained.

Its nerve-building energies are perhaps in a great part due to the phosphorus it contains, making it extremely valuable for shattered nervous systems as well as in rachitic cases; its prompt and thorough alterative effects observable in the strumous, scrofulous, phthisical and rheumatic are due probably to the contained iodine and bromine, as well as perhaps to other constituents the therapeutic value of which is not known.

When we try to compare the virtues of the old oil with that now manufactured, I think there are several facts which indicate that the former was therapeutically the more efficacious. In my boyhood I took cod-liver oil daily for months at a time extending over a period of several years. In those days the two oils were in competition, the steam-prepared, yellow oil was the more pleasant to the taste and to smell, but our "family doctor," as well as all of our experienced friends, advised the old, browner more odorous and more fishy oil; the consequence was I began early to inquire why there was any need to take the more disagreeable oil. All I learned was that its effects were more prompt and more thorough, that in the opinion of the older doctors of that day the new oil was deficient in some of the healing virtues of the old, and their belief was so universal that I early became convinced that this was a truth and not merely a prejudice.

Tending to the same conclusion, if we look over the medical literature of the period of 1855 to 1870, we find that as the old oil gave way to the new, numerous manufacturers placed preparations of cod-liver oil on the market purporting to be fortified with one or more of its active principles, especially do we notice *iodised oil*, *phosphorised oil*, used in varying strengths up to $\frac{1}{4}$ grain to the ounce of oil, and *brominised oil*. It is significant, to say the least, that this flood of fortified oils should appear at this time immediately after the adoption of the new steam process. It would seem that some lack in the new oil must have been detected at once. This endeavor to improve on the nutrient and alterative virtues of the new cod-liver oil continues to quite an extent even up to the present day.

Between the new and the old oils there are but two fundamental differences. (1) The old oils contained a much greater proportion of the decomposition products, such as the alkaloids, than the new oil. These alkaloids are by some considered as abnormal⁸ and by others as the active principles.⁹ (2) The old oils necessarily retained more of their volatile constituents than the new oils, as in the process of preparation of all the old medicinal oils no heat of any kind was used, subsidence and pressure only being the means of expression, whereas all of the new oils are subjected to a long-continued heat of about 180° F., and often much above this point; thus the volatile constituents, especially the halogens and the phosphorus, are in great part removed in the preparation of all the modern cod-liver oil.

Convinced of the above facts, some years ago I began to contrast the therapeutic effects of the new oils as compared with the same oil fortified by the addition of iodine, bromine and phosphorus, and I was soon satisfied that their addition seemed to intensify the normal therapeutic virtues of the oil. Later on, not being convinced of the distinctive value of the bromine in the preparation, I omitted it, retaining only the iodine and phosphorus.

Feeling sure of my position in this matter, I gave my formula to a Philadelphia druggist with the request to so combine these elements with the oil as to retain its normal pale color while endeavoring to improve both the odor and palatability.

As the result of our experiments we succeeded in producing a preparation which we have designated, *Oleum Morrhuae Iodi-Phosphoratum*, a clear, light-yellow oil, flowing perhaps more freely than most good oils, having less of the fishy and less of the hydroxylation odor than usual and a much less marked fishy taste. Each tablespoonful of this oil is fortified with one-one-hundredth of a grain of pure free phosphorus and one-twelfth of a grain of pure free iodine, neither ingredient being at all noticeable either to taste, sight or smell, and yet by the method of ultimate analytical analysis all recoverable therefrom.

As having perhaps an important bearing on this question, I will call attention to an alternative preparation rather extensively used in our city, quite constantly by the late Dr. Pepper and by him sometimes called a summer substitute for cod-liver oil. I refer to *Vini Iodi Comp.*, each teaspoonful of which contains one-one-hundredth of a grain of free phosphorus and one-sixth of a grain each of free iodine and bromine. It is typically an alternative. It has little or no effect upon the bodily weight, except inasmuch as it stimulates growth by restoring to the tissues healthy action. In no sense is it a nutrient and thus differs markedly from cod-liver oil. It is extremely valuable as a substitute for all those patients usually benefited by cod-liver oil, who, on account of the extreme heat of the summer or a temporarily abnormal sensitiveness of the stomach-walls or a nervous excitability of the palate, are unable for the time to take oil. It seems to have all the virtues of the oil without its nourishing and fattening qualities.

I have found this fortified oil more easily taken than others. It is less repulsive to the taste and smell, and in many cases patients soon learn to like its taste as well as its effects. It is more easily digested and much less liable to be followed by eructations. This increased digestibility is no doubt due to the soothing influences of the iodine on the stomach-walls. It is more prompt in its systematic effects in building up the tissues. Its alterative effects are more prompt and more pronounced. The prescription reads as follows:

R. Olei Morrhuae Iodo-phosphoratum, Oi.

S. One tablespoonful at night, only on retiring, preferably followed by a taste of lemon.

For a period of perhaps seven years I have constantly been prescribing it, using it in a thousand or more cases, and I have had but two or three instances in which patients insisted that they could not take it. I have not observed a single case in which it had a bad effect, and in every case I believe I noticed an advantageous effect markedly beyond that which I formerly observed in similar cases when using the plain oil in equal quantity. I have named it *Iodo-Phosphorised Cod-Liver Oil*, and usually write my prescriptions as here noted, rarely ordering it to be taken more than once a day and then at bedtime. When necessary to use it oftener I prescribe it at meal-time in addition, but I do this rarely. Occasionally I have the patient take a little whisky with the oil, but almost invariably advise that a piece of lemon be used after taking the oil.

I believe this matter of prescribing the oil at night, the last thing at night just before slipping into bed and taking the lemon thereafter, to be a very important one to the patient, making its administration more pleasant and its digestion more rapid.

This preparation of *oleum morrhuae iodi-phosphoratum* is a perfectly stable preparation made

agreeable by the addition of aromatics, containing 95 per cent. of pure Lofoten cod-liver oil, each ounce containing one-sixth of a grain of pure free iodine and one-fiftieth of a grain of pure free phosphorus. It will keep indefinitely if stored in a cool place and tightly corked, but, like all cod-liver oils, if kept too long, for a few years, for instance, or exposed to the light, the fatty acids become oxidized, in other words, hydroxylation occurs and the oil then becomes unpleasant to the stomach.

No cod-liver oil, however, can be expected to keep well without hydroxylation for a much greater period than a year after its preparation, and this preparation of *oleum morrhuae iodophosphoratum* must in this respect be judged by the ordinary standards. Convinced that, if this preparation be tried faithfully and used as advised, it will meet with approval, I take pleasure in recommending it to the notice of the profession.

BIBLIOGRAPHY.

- ¹ Müller, F. Peckel. Cod-Liver Oil and Chemistry, London, 1895, p. 4.
- ² U. S. Dispensatory, 1883, p. 1024.
- ³ Möller. *Ibid.*, p. 113.
- ⁴ Shoemaker, J. V. Therapeutics and Materia Medica, 1897.
- ⁵ Möller, *Ibid.*, p. 106.

1723 Walnut Street.

MEDICAL PROGRESS.

Inhibition of Heart in Diagnosis.—After discussing the methods employed by various investigators in producing cardiac inhibition, and the results obtained by them, Albert Abrams (*Phila. Med. Jour.*, September 29, 1900) says that in his experience inhibition of the heart is best attained, for clinical purposes, by voluntary, forcible contraction of the muscles of the neck. This maneuver is easily learned, even by children. If too much exertion is employed in contracting the muscles of the neck the result will be acceleration, not inhibition, of the heart-movements. In the case of those patients who cannot learn the maneuver, the writer places a long, narrow cushion under their chin and directs them to press with all their might on the cushion with their chin. By this maneuver the heart's action is not stopped, but there is obtained an inhibition of the intensity of the heart-tones. Abrams cites seven cases illustrating the value of the inhibition maneuver as an aid to diagnosis and presents the following essential facts as the result of his investigations: (1) The inhibition maneuver will cause organic cardiac murmurs to become faint and in exceptional cases will render them inaudible. (2) Transmitted murmurs are more amenable to the maneuver. (3) The fainter the murmur, the more easily is it suppressed by the maneuver. (4) When a transmitted murmur can be inhibited, the tone which it masks can be auscultated. (5) Heart-tones are less amenable than are heart-murmurs to inhibition. (6)

Hemic murmurs are more readily inhibited than are the organic murmurs. (7) Usually the murmurs of anemia may be suppressed, and their evanescence is marked by the reappearance of tones. (8) Exocardial murmurs are easily influenced by the inhibition maneuver. (9) When the inhibition maneuver is incorrectly executed, the result is to increase the intensity of the murmurs owing to increased exertion which intensifies the heart's action. (10) The inhibition maneuver when often repeated is futile in its results owing to overstimulation of the vagi. (11) In irregular action of the heart or in delirium cordis, the inhibition maneuver, by momentarily inhibiting the rapidity of the heart, renders signal service in determining the time of a murmur; the effect of the maneuver being practically like that of digitalis. (12) The inhibition maneuver enables us to determine the condition of the vagi as inhibitors of the heart and guides us in the use of cardiotonics.

Mesenteric Cysts.—Upon these relatively rare occurrences, C. N. Dowd (*Annals of Surgery*, October, 1900) suggests these data. The diagnosis is rather difficult because the cyst is commonly freely movable and gives tympanitic resonance on all sides of itself, and in the uncomplicated cases is not connected with the pelvic organs. The symptoms are chiefly those of the mechanical presence of the cyst, namely, pain from pressure, constipation and vomiting, occasionally emaciation ascribed as a rule to interference with the chylous return. The prognosis corresponds with the facts that these cysts are to be considered among the serious abdominal tumors, and that they are usually so situated as to be rather easily removable. When practicable exploratory incision and ablation are indicated, when removal is impracticable suture to the abdominal parietes, evacuation and drainage are necessary. Jessett has successfully enucleated a cyst and resected a portion of the intestine included in its wall, just as has been done with solid mesenteric growths. As to the pathogenesis the following summary is stated: (1) A multilocular cyst-adenoma of the transverse mesocolon, containing pseudo-mucin exactly like a cyst-adenoma of the ovary, suggests its probable origin as an embryonic ovarian sequestration; (2) dermoid cysts in the same situs suggest the same embryonic source; (3) chylous cysts in the mesentery, whose contents are chyle and whose walls contain lymphatic vessels, indicate embryonic cysts into which an effusion of chyle has occurred; (4) sanguineous cysts appear to be cysts into which hemorrhage has occurred; but hematoma of the mesentery should not be described as sanguineous cysts; (5) cysts whose walls resemble intestine are evidently sequestrations therefrom; (6) serous cysts are usually similar to the classes above but are not usually in the paths of the lacteal vessels; (7) hydatid cysts are a class by themselves and are due solely to the tenia echinococcus; (8) reports indicate

that these cysts are encountered at least once per month. If examination were made of its contents and walls probably the whole matter would soon be cleared up; (9) probably the whole pathogenesis can be explained as either embryonic, hydatid or malignant.

Ammonio-Formaldehyde.—This drug may be used in the form of urotropin, cystogen, or ammonioform, with uniform effect. The more important effects of urotropin, as exploited in Germany and in this country, give rise to the following axioms: (1) The effects of urotropin are almost entirely confined to the urinary passages: (2) These effects are due, in part at least, to the liberation of formaldehyde in the urine. (3) These effects are heightened acidity, marked antiseptic properties, and variable irritation of the neck of the bladder. Edward L. Keyes, Jr., (*Phila. Med. Jour.*, September 29, 1900) discusses some of the advantages of the drug and certain limitations to its usefulness and suggests a practical way of handling it to the best advantage. Fifteen to forty-five grains are usually given as the daily dose, and most writers say that if the daily dose be kept below thirty grains the irritation, the pollakiuria, and dysuria will not appear. Keyes reports a number of cases illustrating some of the variations in the action of urotropin in different cases. Case I. had had paralysis of the bladder, with cystitis and pyelitis, for about thirty years. Seven and a half grains of urotropin three times a day caused serious vesical irritation. Later fifteen grains daily cleared the urine of bacteria and all shreds, but twenty grains doubled the deposit and caused some irritation. Any remission in the administration of the urotropin in this case was followed by a reappearance of the bacteriuria, while fifteen grains kept the urine clean. In Case II. forty-five grains were given daily for nine days without any vesical irritation. The drug was then given in a daily dose of fifteen grains for a month, at the end of which time there were no bacteria or albumin present. The urine has remained clean for two weeks at this date. The writer thinks the difference in these two cases, as to the vesical irritation, is one of idiosyncrasy. After giving urotropin the writer has been able to dilate strictures without causing a chill, and he habitually employs the drug in cases in which urinary chill or septicemia are present or threatening, especially in operative work. Case III. illustrated the post-operative diuretic effect which Keyes has observed in a number of cases. He has, however, never known urotropin to have any diuretic or other beneficial effect on chronic uremia. In Case IV. a wound caused by a suprapubic prostatectomy sloughed and did not heal because of formalin irritation due to the fifteen grains of urotropin which the patient was taking daily. On substituting salol for the urotropin improvement and, eventually, healing took place. From his experience in other cases, the writer believes that this patient exhibited an idiosyncrasy. Keyes

sums up his conclusions as follows: (1) Urotropin seems to be almost a specific in some cases of uncomplicated acute catarrhal pyelitis. (2) To prove effective it may have to be administered in large doses until the urine is practically free from bacteria, after which a smaller dose may be sufficient. (3) In judging the effects of the drug, the centrifuge and the microscope should be employed. (4) The dose must not be sufficient to cause pollakiuria and dysuria by irritation of the neck of the bladder. (5) The possibility of such an irritation cannot be overlooked even when small doses are given. (6) Urotropin is extremely serviceable as a prophylactic of the various forms of urinary septicemia and urethral chill. (7) Its routine employment both before and after operations on the urinary passages is indicated. (8) The urine containing urotropin occasionally has an escharotic effect upon wounds which may constitute a contraindication to its use.

Primary Renal Tuberculosis.—O. G. Ramsay (*Annals of Surgery*, October, 1900) formulates the following conclusions upon this subject: (1) That primary renal tuberculosis may be classed as a semi-malignant form of inflammation, and that for this reason surgical treatment is always indicated. (2) That this surgical treatment will have a palliative or a curative end in view depending upon the condition of the patient and the extent of the local pathological process. (3) That nephrotomy in renal tuberculous processes is to be designated as a palliative operation with the chief aim of the immediate relief of grave symptoms, and that it does not preclude a secondary nephrectomy, and that coupled with free evacuation and drainage of abscesses is a most valuable procedure. (4) That resection of a diseased portion of a tuberculous kidney is a most dangerous procedure, because it is not always possible to take out all the disease and a focus so left behind may infect the other kidney or the system at large or both. (5) That nephrectomy or nephro-ureterectomy is distinctly indicated in every suitable case and in suitable cases should result in permanent cure in 55.5 per cent. of all cases. (6) That the indications against nephrectomy are tuberculous disease of the other kidney or of other organs in the body. (7) That tuberculous disease of the bladder is not to be considered a contraindication to nephrectomy because it will probably heal later. (8) That a small tuberculous focus in the lung, provided the patient is otherwise well, is not to be considered as a contraindication. (9) That in cases of doubt as to whether a patient can stand an immediate nephrectomy, it is best to do a nephrotomy and leave the nephrectomy to a later date. (10) That the clamp method of managing the pedicle is contraindicated on account of the danger of hemorrhage upon removing the clamp. (11) That it is safest to remove the ureter with the kidney, as a persistent fistula may give trouble if it be allowed to remain in the body. (12) That the majority of these fistulae tend to heal

either after the removal of a deep suture or after the slow disappearance of tubercular disease along the ureter, which then becomes a fibrous cord. (13) That we may expect an increasing number of cures as our means of diagnosis improve and our surgical technic is carried out more scientifically and carefully.

Some Cardiac Conditions.—The most inferior and posterior portion of the heart, writes W. H. Porter (*Post-Graduate*, September, 1900), is the left auricle, and from it the blood flows to the ventricle from right to left, forward, and usually upward, toward the junction of fourth rib and cartilage. All organic valvular lesions come under five headings, *vis.*: Congenital malformations, acute and chronic endocarditis, acute and chronic dilatation of the cavities, rupture of a valve-segment, and rupture of the chorda tendinae. In mitral regurgitation the murmur is produced by some of the blood flowing back from one full cavity to another full cavity having less blood-pressure. If the blood-pressure in the ventricle falls until equal that in the auricle, the murmur disappears, to reappear when the tone of the ventricle is restored. This systolic murmur is transmitted to the left, usually lost at the anterior axillary line, and heard again posteriorly midway between the angle of the left scapula and the vertebrae. The presystolic murmur of mitral stenosis is really a systolic murmur of the left auricle; if the muscular power becomes enfeebled the murmur may entirely disappear, and with the resumption of power it is reestablished. This murmur and that of aortic stenosis are produced by blood flowing in its normal direction; the murmurs of regurgitation, by blood flowing against the normal current. A presystolic murmur without alteration in structure of the mitral valve may occur with aortic incompetency if the rapidly regurgitated blood reaching the left ventricle floats up a segment of the mitral valve so as to cause partial obstruction. It not infrequently happens that a mitral systolic murmur persists in life, but autopsy shows no mitral lesion. The insufficiency may have been due to unequal innervation, or unequal nutrition of the papillary muscles, causing one to allow its valve-segment to float too far into the auricle and thus producing a gap. The treatment of cardiac lesions should be directed to establishing a higher nutritive condition in the heart, and throughout the whole system; for when hypertrophy takes place to produce compensation, there is no corresponding augmentation of the blood-supply to the heart muscle, and degeneration follows, with dilatation and finally lack of compensation.

Epidermolysis Bullosa.—A case of this rare and unique affection is reported by C. P. Russell (*Jour. Cutaneous and Genito-Urinary Dis.*, September, 1900). The patient was a boy, eight years of age, born in Alaska. He has always been strong and well. Has had no diseases except measles when he was two years old. From the history it is probable that he has had the

present disease for five or six years. The history is that he has been troubled almost constantly with recurring large and small bullae, forming usually over the joints or wherever the integument is tightly stretched. These bullae, in nearly every instance over a joint, occur most frequently in response to a slight bruise or blow. Some of these bullae, especially those not directly over a joint, seemed to have arisen spontaneously. The knuckles of both hands have always been a favorite location for the formation of the bullae. On the knuckles the bullae vary in size from a split pea to a dime, but about the wrists and ankles they are sometimes as large as a half dollar, while over the knees they are three or more inches in diameter and form a large bulging sac distended with a straw-colored serum. It has been noticed by the boy's guardian that preceding the formation of an unusually large bullae there would be a slight swelling and raising of the skin, with some congestion. The lower extremities have been most effected. A very slight knock or pressure on the skin is sufficient to cause a bulla. The bullae are of very irregular shape primarily, and their irregularity not being due to the fusion of two or more, is characteristic of this disease. The boy presents no other symptoms of any sort, except marked hyperidrosis. He perspires freely even in winter. This profuse perspiration has been a marked feature in nearly all cases hitherto reported. In many cases heredity seems to be an etiological factor, but no such influence can be traced in this case. An illustration, showing the character of the lesions, accompanies the report.

Prostatectomy.—The technic of this operation, claims H. Mynter (*Annals of Surgery*, October, 1900), should be improved especially by avoiding suprapubic cystotomy or laparotomy in order to crowd the organ down to the operative field, and thus obviating the shock of the operation and the prolonged after-treatment in bed, to say nothing of the other greater risks. In a patient of his, weighing two hundred and forty pounds and except for the prostatic diseases perfectly healthy, he followed this method. The usual straight anteroposterior perineal incision was met by a semicircular one embracing the anus and close to it. The rectum was next freed and the prostate, well in view all the time, was crowded down by a hand above the symphysis pubis. A stone-searcher occupied and outlined the urethra. Enucleation of all the lobes was accomplished without deliberate opening of the bladder or the urethra. The urethra was accidentally torn between the sound and the finger-nail toward the end of the operation. This necessitated the drainage and the long after-treatment which would otherwise have been avoided. This tear can be escaped beyond doubt, the writer thinks. Where cystitis makes drainage necessary, a permanent catheter can be tried, or, failing in that, the urethra can be opened later in the perineum well forward. The removed prostate in this case weighed 2¾ ounces.

THERAPEUTIC HINTS.

Influenza.—H. C. Wood recommends the following:

R Antipyrin.....	1.0	(gr. xv)
Pilocarpin. muriat.....	0.03	(gr. ss)
Tinct. aconiti.....	0.25	(gtt. viij)
Aquæ q. s. ad.....	45.0	(℥iss).

Dose: A tablespoonful followed by a general bath or foot-bath lasting ten minutes; after this, the patient is put to bed, and a dessertspoonful given in a glass of hot toddy, to be repeated in twenty minutes unless sweating occurs before. If there is much pain, 0.01 gram (gr. 1/6) of morphine may be added to the mixture.

Chronic Parenchymatous Nephritis.—It is this form of nephritis, writes James Tyson, which gives rise to the intense anemia so characteristic, and iron and other tonics must be administered. Much of the headache, general discomfort, and constipation, however, is due to too large doses of iron, and this should never be given in sufficient amount to blacken the stools. Basham's Mixture is valuable, or the following, in which the amount of iron may be varied and enough acetic acid added to make a solution:

R Tinct. ferri chloridi.....	4.0	(℥i)
Liq. ammon. acetat.....	120.0	(℥iv)
Acidi acetic q. s. ad. solv.		

M. Sig., a dessertspoonful night and morning, freely diluted.

Strychnine is an admirable adjuvant tonic to the iron, and may be dissolved in the same mixture. —*Amer. Text-Book of Applied Therapeutics.*

Calomel in Hemorrhoids.—This drug is not only curative, but also prevents the phlebitis which causes so much pain. For external hemorrhoids give laxatives, and powder with calomel; for internal hemorrhoids use calomel suppositories or an ointment of

R Calomel	2.0	(gr. xxx)
Vaseline		
Lanoline	aa. 15.0	(℥ss).

Add belladonna or opium if desired. Wash anus with boric-acid water after each defecation.—*Jour. de Méd. de Bordeaux*, Sept. 23, 1900.

Chronic Constipation.—The formula for Hinkle's cathartic pill is:

R Cascarin		
Aloin	aa. 0.015	(gr. ¼)
Gingerine		
Ext. belladon.....	aa. 0.008	(gr. ⅙)
Podophyllin	0.01	(gr. 1/6)
Strychnine	0.001	(gr. 1/60).

Dose: One three times a day, or one or two at bedtime.

Prolapse of Rectum.—For loose sphincter with slight prolapse in a child of two years, Jacobi advised faradism for four or five minutes each day, hypodermics of strychnine sulphate, 0.001 gram (gr. 1/60), every second day, and the lo-

cal application of five- to ten-per-cent. ext. nuxvomica ointment, a piece the size of a pea after each defecation. For the prolapse of sessile polypi, he orders the insertion of a piece of ice, injections of ice-water, and a lotion of one- to two-per-cent. tannic-acid or alum solution.

Acute Rheumatism.—A useful lotion to be applied to the inflamed joints on warm lint is that of Dr. Fuller:

R Tinct. opii.....	30.0	(℥i)
Potass. carbonatis.....	15.0	(℥ss)
Glycerini	60.0	(℥ij)
Aquæ	270.0	(℥ix)

The dressing should not be covered by any impermeable material.—*Amer. Text-Book of Applied Therapeutics.*

Purulent Pleurisy.—Capitan at once aspirates all the fluid possible; if it returns, he again removes it and injects a few drops of camphor and betanaphthol, equal parts, or some peroxide of hydrogen. If the pus then persists, an opening is made under cocaine, by knife or thermocautery, and drainage established. He agrees with Desplats that the operation is simple and that removal of rib is unnecessary. As anesthetic and to avoid cardiac or respiratory difficulties a good injection is 1.0-2.0 cc. (℥ xv-xxx) of

R Cocainæ hydrochlor....	0.10	(gr. iss)
Morph. hydrochlor....	0.05	(gr. ¼)
Sparteina sulphat....	0.20	(gr. iij)
Atropinæ sulphat....	0.02	(gr. 1/3)
Aq. dest. q. s. ad.....	10.0	(℥iiss).

This is supplemented by ethyl-chloride spray. At the first sign of trouble inject:

R Sparteina sulphat....	0.05	(gr. ¼)
Caffeina		
Sod. benzoat.....	aa. 0.20	(gr. iij)
Aq. dest.	1.0	(℥ xv).

Repeat if necessary. He lays stress on not operating till the deposits of fibrin have become loosened from the pleura. Normally a certain dulness and indistinct breathing persist after aspiration, and when this disappears above the level of the reaccumulating fluid, it indicates detachment of the fibrin. The results of operation are satisfactory in empyemas due to pneumococcus, streptococcus, or staphylococcus, but not in those of tubercular origin.—*La Méd. Mod.*, Sept. 5, 1900.

Chronic Bronchitis.—In the majority of cases the derivatives of tar, turpentine and balsams are the most efficient expectorants. They are specially indicated in relaxed conditions of the mucous membranes, with excessive secretion, in combination as follows:

R Ol. Terebinthinae }	aa ℥ 20
Picis Liquida...		
Ol. Eucalypti		℥ 50
Balsami Tolutani		3 1½
Benzosol		34

M. et disp. in caps. No. 60. Sig. One four or five times a day.—*Butler, Medical Standard.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL
OF MEDICAL SCIENCE.

COMMUNICATIONS in the form of Scientific Articles, Clinical Memoranda, Correspondence, or News Items of interest to the profession are invited from all parts of the world. Reprints to the number of 50 of original articles contributed exclusively to the MEDICAL NEWS will be furnished without charge if the request therefor accompanies the manuscript. When necessary to elucidate the text illustrations will be engraved from drawings or photographs furnished by the author. Manuscript should be typewritten.

SMITH ELY JELLIFFE, A.M., M.D., Ph.D., Editor,
No. 111 FIFTH AVENUE, NEW YORK.

Subscription Price, including postage in U. S. and Canada.

PER ANNUM IN ADVANCE	\$4 00
SINGLE COPIES	10
WITH THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, PER ANNUM	7 50

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in registered letters.

LEA BROTHERS & CO.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK,
AND NOS. 706, 708, & 710 SANBOM ST., PHILADELPHIA.

SATURDAY, OCTOBER 20, 1900.

THE NEW YORK STATE MEDICAL ASSOCIATION.

THE seventeenth annual meeting of the New York State Medical Association, held on Monday, Tuesday, Wednesday and Thursday of this week at the New York Academy of Medicine, was the most successful gathering in the history of this organization.

This Association has been pushing its way into the front ranks on straightforward and praiseworthy lines, and the high standards it has steadily advocated have tended to make a centralized and harmonized body capable of exerting much valuable influence on the medical interests of the country.

The meeting was attended by over three hundred members and delegates from every region of the State and the social and scientific features were unusually well managed and attractive. The rule of twenty-minute papers was adhered to in a manner that reflected much credit on the President of the Association.

The symposium on Obstetrics was practical and brought out a number of papers of much value, that on the Blood was marked by a series of studies of great interest and importance. A number of these we will present to our readers. The group of papers on Tuberculosis was characterized by breadth of treatment, as most of the

organs of the body were considered in their relation to the tuberculous process.

Taken as a representative meeting of the State Association, its officers and well-wishers can be proud of the showing made.

HEMATOLOGY AND DIAGNOSIS.

THE examination of the blood constitutes one of the most important features in the scientific medicine of to-day. Scarcely known ten years ago beyond the confines of physiology, the study of hematology has now by steady elaboration, mainly in the hands of Hayem, Ehrlich, Thayer and Cabot, assumed a prominent position in the thought and practice of scientific physicians. The symposium on the blood given before the New York State Medical Association this week is another evidence of that wide interest taken in the subject by all progressive physicians ever ready to make use of the most recent acquisitions of scientific investigation.

In the discussion at this meeting questions mainly of clinical interest were considered. During the course of his remarks on the technic of blood examination, Dr. Edward K. Dunham of New York pointed out the well-known sources of error in the estimation of hemoglobin by the Fleischl instrument usually employed. Variations in the diffusion of the coloring principle and the element of personal equation in the comparison of the tint obtained constitute the more serious inaccuracies in the estimation; the latter alone, in the speaker's opinion, amounts to at least five per cent.

Appreciation of the value of blood-tests in surgical practice is still of very recent date. This is one of the most promising sides for future research in work of this kind. Many points in diagnosis were ably discussed at this meeting by Dr. Bloodgood of Johns Hopkins University. The author, as a result of his careful studies of the leucocyte count with reference to abdominal surgery, was able to formulate some valuable conclusions with regard to appendicitis, peritonitis and intestinal obstruction. By the leucocyte estimation alone he showed that an earlier diagnosis, always of importance in these conditions, was often possible. A high leucocytosis is evidently almost always present in acute appendicitis, being particularly high when the appendix is distended with pus or in the gangrenous forms. With an increase in the severity of the symptoms there is usually a corresponding in-

crease in the leucocytosis; with amelioration the count usually falls quite rapidly. A rising leucocytosis with symptoms of appendicitis is then always a serious indication. With a count of over 20,000 under these conditions Dr. Bloodgood urges immediate operation; gangrene, abscess formation, or peritonitis have probably already begun. In cases with a recent history of appendicitis and a high leucocyte count, the probabilities are that abscess formation has occurred; however, absence of leucocytosis does not exclude such a condition.

It is agreed that the leucocyte count rises with the increase in the acute peritonitis; however, just before death a rapid fall occurs very often, a condition sometimes very confusing, for just such a thing occurs with abatement of the peritoneal inflammation. Dr. Bloodgood has particularly investigated typhoid peritonitis in this connection; his results are of great practical value. Dr. Thayer and he have found that any rise of the white cells in typhoid fever almost invariably indicates some definite inflammatory complication. And peritonitis is no exception to this rule. With a rapidly rising count and abdominal distress the diagnosis of perforation may be considered highly probable.

The most recent views regarding pernicious anemia and leukemia were ably considered by Drs. Stengel and White of the University of Pennsylvania. With the exception of some contributions to the gastrointestinal lesions and detail to the other symptoms the masterly description of pernicious anemia by Addison stands today just as it did then. Dr. Stengel regards the disease as a toxic affair, probably of gastrointestinal origin. The blood-pictures in this disease and leukemia were long supposed to possess specific diagnostic features; Drs. Stengel and White, however, both showed, as others have already done, that a consideration of all phases of the blood examination associated with the clinical history are necessary for an accurate and intelligent interpretation of the condition.

The malarial parasites in their connection with blood examination were discussed by Dr. Le Wald of New York City. A very complete exposition of the mosquito theory of infection as enunciated by Manson and his followers was given. The speaker accepted their main conclusions *in toto*.

The value of blood examination in the diagnosis of trichinosis, already exploited by Brown, Thayer, Blumer and others, again received fur-

ther confirmation by the studies of Dr. Gordinier of Troy, N. Y. He reported two cases with complete blood examinations; the well-known increase of the eosinophiles which occurs in this disease alone made possible the probable diagnosis, verified later by other methods.

When methods for the determination of the germicidal and protective powers of the serum will have been devised, then, indeed, will we seemingly have reached the utmost point in one of the richest fields of study. With the progress of the times, it seems not unreasonable to believe that this will shortly be forthcoming.

THE HEALTH OF CITY DWELLERS.

IN the innocence of youth we used to imagine that there was no health within city walls. We even shared the delusion which possesses so many foreign artists and makes them portray the American urbanite as an attenuated conglomeration of skin and bones; as one, in fact, whose incessant pursuit of the elusive dollar has brought him to such a sad state of physical, mental and moral decrepitude that he is fit only to serve as a horrible example to mankind. On the other hand, the tiller of the soil stood—in our young fancy—as the very incarnation of health. For us all farmers were round and ruddy, their helpmeets buxom and prolific, their offspring freckled and strong-limbed.

What havoc the evolutionary realities of the past few decades have played with the fancies of the artist and the child! And all because the city dweller has learned to give due heed to the laws of hygiene. He has discovered the vast importance of municipal and domestic sanitation, the equally great value of proper food and clothing, and the absolute necessity of interrupting the routine of toil with a proper modicum of play in the open air.

It is upon the importance of this rapidly increasing tendency of the city dweller to play out-of-doors that we wish to dilate. Never before in the history of this country has Nature cast such a spell over him in such a sane, wholly commendable way. She has no great living disciple like Thoreau, who can convert people to her so eloquently as almost to persuade them—as Rousseau did—to go on all fours. Nor would the city dweller of to-day listen to such a sermonizer upon Nature. He is eclectic in his tendencies, knows the value of cosmopolitanism to a mind of healthy

growth, and compromises with Nature by taking certain courses at her school. These courses are of a peripatetic order of a peculiarly healthful type, in that it is the student and not the teacher who does the walking about. Now, if the booksellers' announcements are any index, the number electing these courses this last spring must have been enormous, for on every hand we were met by the statements that popular treatises on birds, and trees, and wild flowers were selling in the thirty thousands. What the resultant rambles in the open mean in the way of pleasurable emotion and delicious fatigue to the purchasers of these books we leave to our readers to surmise.

Of all the many artifices by which Nature decoys the city dweller to her haunts for a time and gives him health and pleasure in return for his neglected work, lack of space forbids even the mention. For some years now the camera craze (salutary madness!) has been upon us and set our motor activities toward the open. It has excited to a high pitch our roving instincts and awakened our appreciation of Nature's choicest beauties. Even the trolley car, dread juggernaut, deserves to have its therapeutic value weighed in the balance with its deadly propensities. It has taken us to charming suburbs where, between lunch and dinner, we might fill our lungs with the uncontaminated air of heaven and see wild things growing, and hear the song of birds. The bicycle, much abused instrument of health, certainly should have its meed of praise. On the whole it has been of immense value to the city dweller as a means of exercise in the open and has enabled him to escape for varying periods of time out of the ruts of daily life.

What we owe to the game of golf as a factor in the maintenance of the city dweller's health cannot easily be estimated. Never has a game been introduced into this country which has so quickly secured such a powerful hold upon persons of all ages and nearly all conditions. It takes its devotees out-of-doors under the most ideal circumstances imaginable and requires no greater expenditure of energy than they are perfectly safe in making.

The dress reform which has followed in the wake of the widespread tendency among urbanites toward the open is in itself worthy of the physician's warm approval. Look at the shirt-waisted and short-skirted young woman of today as, with bare head and bronzed bare arms,

she pursues the wayward golf ball over hill and dale. Her movements are as lithe and free as those of a young animal, and her indifference to the elements is superb. Contrast her with the representative of the same social stratum of a few years ago—the "pale and interesting" young woman with a penchant for syncope and sour edibles—and see if we have not gained vastly by the change. The ideal types of young American womanly and manly beauty which the artist, C. D. Gibson, created ten or more years ago are fast becoming a commonplace reality in cities, and the reason therefor is none other than the now nearly universal out-door-play tendency of the age. To foresee the vast evolutionary import of this tendency to coming generations requires no great measure of discernment.

How has it fared meantime with "the man with the hoe"? If we were to judge from the innumerable testimonials from rural dwellers as to the efficacy of patent nerve invigorators and dyspepsia annihilators, which appear in the daily and religious press with ever-increasing and exasperating frequency, we should say "not well." But this conclusion may be unjust. It may be affirmed, however, without fear of cavil that for some good reason—bad cooking, monotony of occupation, lack of intellectual intercourse with the outside world or what not—the round and ruddy farmer, with his ample-bosomed spouse and freckled offspring, is about as scarce nowadays as the dodo.

ECHOES AND NEWS.

NEW YORK.

Illness of Dr. Sayre.—It is reported that Dr. Reginald H. Sayre is sick with typhoid fever.

Poisoning by Fly Paper.—A case of poisoning due to the licking of fly paper is reported by the daily press as having occurred at Matamoras, N. Y., in a young child. The main symptom observed was convulsions.

Plague Serum from Paris.—When the bubonic plague appeared in Glasgow, Dr. A. H. Doty, health officer of the Port of New York, ordered a quantity of plague serum from the Pasteur Institute, at Paris, as a precautionary measure for use at Quarantine in the event of the plague being brought to this country. The serum arrived some days ago and is now in the Quarantine Laboratory.

Unique Cause of Insanity.—An autopsy performed at Bellevue this week on a man who had

developed insanity within a comparatively recent time, revealed two bullets, one within the cranial cavity. The history of the case showed that he had probably tried to commit suicide, but had failed in the attempt, and had developed an insanity as the result of the traumatism.

Razorless Shave Damages.—As the result of using a patent remedy advertised to take off the hair without the use of a razor, a citizen of this city not only lost his beard, but a large amount of the skin of his face. He is suing for \$2000 damages. The preparation is probably one of the many combinations of arsenic and potash.

New York Obstetrical Society.—At the annual meeting of this Society held Tuesday, October 9, 1900, the following officers were elected for the ensuing year: President, H. J. Boldt, M.D.; First Vice-President, Ralph Waldo, M.D.; Second Vice-President, H. N. Vineberg, M.D.; Recording Secretary, G. L. Brodhead, M.D.; Assistant Recording Secretary, G. G. Ward, Jr., M.D.; Corresponding Secretary, E. E. Tull, M.D.; Treasurer, J. Lee Morrill, M.D., and Pathologist, W. S. Stone, M.D.

Obituary.—Dr. Franklin Smith, seventy-six years old, died at his home, 366 Broome Street, one Tuesday night, October 9, 1900, after a short illness. He was born in this State, and for over a quarter of a century had been a resident of this city. He was a graduate of the Medical Department of the New York University, and for twenty years was a school trustee in the Fourteenth Ward.

Dr. William R. Larkin died October 15th from apoplexy, after an illness of ten days, at his home, No. 328 St. Nicholas Avenue. He was forty-two years old and a graduate of Bellevue Hospital Medical College. He was one of the founders of the J. Hood Wright Hospital and a surgeon to the New York Fire Department for several years. A widow survives him.

Dispute Over Consumption Hospital Site.—At a joint meeting of the State Forest Preserve Board and the State Board of Health held in Albany, October 11th, to consider the Big Lake Clear site chosen by the hospital trustees, a number of arguments were heard pro and con. Many citizens who owned cottages in the lake region objected on the ground that it would work unnecessary injury to the large number of visitors who yearly spend their summer holidays in the Adirondacks. Such an institution, located in such a region, could not help but prove an offense to the large classes in the vicinity and injurious to the vested interests of many.

Adirondack Tuberculosis Hospital.—In an able letter to the *New York Times* Dr. Eugene Hodenpyl of this city defends the action of the trustees of the New York State Hospital for Consumptives in choosing the site they have in the Adirondacks. He says: "The principal objection to this site, it appears, is on the ground that

the fogs, mists, and dampness from the lake would be injurious to consumptives. This would apply equally to almost every part of the Adirondacks. The amount of rainfall in the North Woods is greater than in other parts of the State, and the region is so abundantly supplied by lakes and streams that fogs and mists in the early mornings during certain seasons of the year are of common occurrence. It is in this very region that so many consumptives, rich and poor alike, on the advice of physicians, have sought for and often have regained their health. It is the consensus of opinion of physicians who have practised in the Adirondacks that the amount of dampness which obtains in this region is not detrimental to the health of consumptives. Pneumonia is seldom observed, and diseases commonly ascribed as being due to exposure to wet are less frequent than in many other parts of the State. The camps which are so frequently occupied by consumptives are almost invariably located on the banks of a lake. In fine, then, the trustees propose to locate their hospital in a region which for years has been regarded as a favorable one for consumptives, and where experience has demonstrated that the results obtained in properly selected cases compare favorably with those of almost any other climate in the world. Objection has been made, too, on the ground of expense of the proposed site. Doubtless other sites could have been bought for less money. It must be remembered, however, that a site suitable for the hospital must possess many advantages; and from what I know of the value of Adirondack property that which possesses many advantages can no longer be picked up for a trifle. Finally, the site has been objected to by some on account of its proximity to some of the summer camps and hotels! Lake Clear is three miles from Saranac Inn, on the Upper Saranac Lake, and is two miles in an air line through the woods from Upper St. Regis Lake, and is over five miles from that lake by road. There is abundant proof to show that at this distance there is not the slightest ground for apprehension on the score of possible infection of the inhabitants of these places. Again, it seems to me, that the proposed site is sufficiently removed from the homes of summer residents, so that no reasonable objection can be made that the institution may detract from the attractiveness and value of property. Indeed, I was told last summer by one of the trustees that no site would be considered which was liable to offend in any way surrounding property-owners. A number of otherwise desirable sites were condemned for this reason alone. The trustees have examined personally almost every possible site in the Adirondacks, spending a good deal of time in so doing. Politics, the schemes of individuals with land to sell, etc., had no place in this board. For my part, I believe they have acted wisely, and that, instead of criticising the State, the poor consumptive and the neighboring property-owner have good reason to commend the work already

accomplished for the New York State Hospital for Consumptives."

PHILADELPHIA.

Medico-Chirurgical College.—A complete change of policy and business management is to take place at this institution. Hon. E. M. Paxson, ex-Chief Justice of the Supreme Court of Pennsylvania, has been elected president. The majority of the board of trustees have been members of the faculty heretofore, but these are to be supplanted by laymen.

Rumored Gift to University.—It is stated that Mrs. Mitchell, wife of Dr. Weir Mitchell, is to give to the University a memorial of her daughter in the shape of an addition to the hospital, or of a separate building, for the treatment of contagious diseases. It is hoped the rumor is true, as Philadelphia is greatly in need of a pay hospital for contagious diseases. An institution has been chartered, but the opposition of citizens to the location of a building, as well as lack of funds, has prevented its further action.

Aseptic Ether Inhaler.—At a meeting of the County Medical Society October 10th Dr. Ernest La Place exhibited an appliance for the administration of ether which he has used for two years with great satisfaction. It consists of an ovoid metal cup with an inner covering of wire gauze, a pad of sterile gauze being placed between the two each time it is used, the holder having been boiled to render it sterile. A crucial opening in the metal allows the pouring of ether upon the gauze and a slight trough catches any overflow.

Hahnemann College.—Dr. Pemberton Dudley, Dean of the College, recently read a paper upon the present diminution in the mortality-rate of the city and its causes. He ascribes it mainly to the fact that the law takes cognizance of the sanitary condition of the people. The suppression of tuberculosis in dairy herds and the persistent teaching of the contagiousness of tuberculosis are having their effect. The more general employment of disinfection in communicable diseases and a better attention to personal hygiene are also important factors.

A Live Hospital.—The Children's Hospital of Germantown, although in existence but little more than one month, has opened a training school for nurses. It is the only absolutely free hospital of the kind in Philadelphia.

Mysterious Inmate of Almshouse.—A young man who is deaf and dumb and can neither read nor write has been at the Almshouse since August 3d, when he was picked up on the street penniless. From a baggage check in his possession and from a rude map which he draws the superintendent believes the man is from Virginia.

Health of the City.—The death-rate continues very low, diphtheria being the only contagious disease at all prevalent. The chief of the Bureau of Health, in order to maintain this desirable condition of affairs, is sending circulars to every physician in the city stating the rules regarding contagious diseases and urging their literal compliance with the same.

School Physicians.—The School Board is considering a resolution requesting Councils to make an appropriation for paying visiting physicians to the schools a yearly salary of \$100 each. This is less than was supposed to be paid when the act making provision for such services went into effect. An appropriation for this purpose has never been secured, hence the resolution.

Philadelphia Hospital.—Drs. Simon Flexner and Joseph McFarland have been appointed pathologists to succeed Dr. H. W. Cattell, resigned. No one can be elected visiting physician unless he promises to give ward instructions or clinical teaching to students. This is in furtherance of the plan to utilize for teaching purposes the vast amount of material at the Almshouse.

CHICAGO.

The Chicago Eye, Ear, Nose and Throat College.—The capital stock of this College has been increased from \$10,000 to \$25,000, and its directors from three to five.

College of Physicians and Surgeons.—The opening exercises were held October 1st, the opening address being delivered by Dr. Robert H. Babcock.

Woman's Medical College.—The thirty-first annual session was opened October 1st, at which time addresses were delivered by Professors William E. Schroeder and Leonard L. Skelton.

The Cottage Hospital.—This institution was one of the first of its kind in the State. It is to have a new main building, which will be erected and equipped in accordance with modern ideas. The capacity of the group of buildings composing the hospital will be about 150 beds.

Meeting of State Board of Health.—The Board recently held its quarterly meeting. A report prepared by the State Bacteriologist was read, which maintained that the water has not been contaminated by the drainage canal. The report proves that St. Louis is not justified in its complaints against the drainage canal. The prevalence of diphtheria in many places in the State was especially considered, and in the opinion of the Board the spread of the disease, in the majority of cases at least, has been due to a lack of recognition of the malady. The Board concluded to carry the case which it instituted against Dr. W. Frank Cross to the State Supreme Court. The defendant is charged with unprofessional conduct for his connection with the so-called National College of Hygiene and the Independent Medical College.

Experimental Psychology and Criminology.—Miss Frances Kellor, of the University of Chicago, has a pet theory that criminality and heredity have nothing to do with each other, but holds that all criminal tendencies result from early home training and subsequent environment. With the difference between the criminal and the normal man established, she believes that by improving legislation criminality can be checked and the criminal reclaimed. She has fitted out a laboratory at the University of Chicago, and her investigations will include hard students, "flunkers," athletes, and society leaders. She says that by "anthropometric measurements of the face, head and body, and observations on cranial development and defects, it is found that members of the same family differ greatly, according to occupation and surroundings. Under the influences of education and culture, the head and body are found to change their shape, while a lack of all these, combined with dissipation, produces the physical characteristics of the criminal. Psychological tests show that in the senses, emotions and intellect, the criminal varies distinctly from the normal man. These are simply the means through which a man responds to his environment. Social conditions have the greatest influence."

GENERAL.

Marriage Reform.—The Tri-State Medical Society of Tennessee, Alabama and Georgia, at its recent annual meeting held last week, took steps to secure medical legislation in those three States for the purpose of regulating or prohibiting the marriage of habitual criminals, persons afflicted with incurable diseases, drunkards, and victims of harmful drugs.

Plague at Glasgow Checked.—All of the plague suspects have been dismissed, but twenty plague cases remain in the hospital at Glasgow. An official bulletin, dated Thursday, October 11th, says: "The outbreak has been completely checked. Twenty-one days have elapsed since the last case. The reception houses will be closed to-day."

British Steamer Carries Plague.—The British steamer "Highland Prince," from Antwerp August 30th, London September 7th, and Bahia October 4th, arrived at Montevideo October 14th with bubonic plague on board. Five deaths, including the captain and first officer, occurred during the voyage.

Study of Carcinoma in Germany.—The Committee for the Advancement of the Study of Carcinoma in Prussia is now distributing the lists of questions and other prints relating to the subject of its activity throughout the German Empire. The replies are to be returned during the current month and later collected.

Dr. Loew Goes to Japan.—Dr. Oscar Loew, for two years past connected with the Agricultural Department as expert in physiological chemistry,

has resigned to accept a position as lecturer in the Agricultural College of the Imperial University at Tokio, Japan.

Jewish Consumptives' Home.—The Executive Committee of the Second District Grand Lodge of the B'nai B'rith met October 14th in Cincinnati to elect trustees for the new Home for Consumptives at Denver, Col. Twenty-nine trustees were elected for one year, among them being the following: Martin A. Marks, Cleveland; Edward Kolish, Richmond, Va.; Samuel Heavenrich, Detroit; A. Abraham, Brooklyn; Joseph Miller, Baltimore; Max Bamberger, Philadelphia; Hannah Beinstein and Emanuel Lehman, New York; Solomon Ginsberg, Buffalo, and Philip Hamburger, Pittsburg.

The Shah of Persia and Doctors.—The Shah of Persia while in Budapest consulted an eminent specialist and was informed that he was afflicted with heart trouble and that the condition of his kidneys would grow serious unless strict dieting was observed. The Shah remarked that he had consulted four doctors in France, three in England, several in Austria and one in Germany, and that not one of them had told him the truth as to his condition.

Brain-Jar of Military Step.—Dr. Colin, regimental physician in the French army, has published in *Health* the results of his investigations into the effects of regular marching in disciplined bodies upon soldiers. The regularity of the step causes the indefinite repetition of a shock of the bones and brain, infinitely more deleterious than an irregular walk, and to this regular repetition of the shock of the same parts of the body is due the peculiar aches, pains and illness of the troops. Dr. Colin's preventive is a rubber heel in all military boots. This heel has been tried at his instance in the French infantry, he says, and the result has been found to be a great relief to the soldiers.

Doctors' Contracts.—A reputable physician and surgeon residing and practising in the Province of Quebec made a contract to render professional services in one of the United States whose laws debarred him from engaging in the practice of medicine there. The contract was broken by the other party to it, and the doctor brought a suit against him in the Canadian courts to recover the value of the work which he had done under the agreement. The defendant interposed a defence setting up the illegality of the contract, as being an undertaking on the part of the plaintiff to practise medicine and surgery in a foreign State where it was unlawful for him to practise. This defence has finally proved successful, the court holding that no compensation is recoverable upon a contract of this character, which is pronounced illegal.

Obituary.—Dr. Benjamin Hussey West, one of the old graduates of Harvard University, died at Neponset, Mass., on Thursday, October 11,

1900. He was born in Nantucket, November 10, 1814, and was the son of Paul West, a lieutenant in the British Navy and commander of the ship "Cyrus." He graduated from Harvard in 1835 in the class with the late Bishop Williams of Connecticut, Judge E. R. Hoar, Amos A. Lawrence, John A. King and others who have been prominent in public life. Only five survivors of the class remain. He was graduated from the Harvard Medical School in 1838 and commenced professional life at Pawtucket. In the early '40s he went to California, where he remained for several years, being a member of the Committee of Safety during 1849. Later he was for many years head surgeon of the Pacific Mail Steamship Company.

Dr. Joseph L. Cutler, for fifty years one of the leading surgeons of Allegany County, died October 12th in Bolivar, N. Y., of uremic poisoning, at the age of seventy-one years. He was born in Moravia, N. Y., graduated from the University of New York in 1850, and the same year located in Bolivar. He served ten months as assistant surgeon of the 134th Regiment New York Infantry during the Civil War. He earned his money to attend college by teaching, and among his pupils at Moravia was John D. Rockefeller, the Standard Oil king, whose first teacher Dr. Cutler was. Dr. Cutler leaves a widow and two daughters.

Medical Course at Bowdoin.—On the recommendation of the faculty of Bowdoin College the Board of Overseers, at its last annual meeting, voted that the work in the first year of the Medical School in physiology and anatomy should be allowed to count as four courses each toward the degree of A.B. in the college. Conversely, work in the college in chemistry and biology will, without doubt, soon be allowed to count as courses in the Medical School. Although this movement is in line with the three years' degree agitation in the universities, it is noteworthy in the policy of Bowdoin. When, a year ago, the course in the Medical School of Maine was lengthened to four years, it was soon found that a combination of the academical and medical courses must be so arranged as to offer completion in seven years.

Non-Medical View of Carlsbad.—Clyde Fitch, the playwright, says of Carlsbad: "If any one ever writes a play at that place it will be on the order of one of the gloomy old mystical German tragedies. If ever there was a place saturated with deadly monotony and unmixed gloom it is Carlsbad. You are routed out of bed at 6 A. M., and wander with a funeral crowd to the springs. This cheerful mob is made up of fallow-faced men and women ever wearing a small glass hung by a strap. The conversation is redolent of medicine. At nine o'clock is breakfast. This repast consists of two thin pieces of meat and two thinner pieces of stale bread. Then the entire crowd climb a series of hills under orders until luncheon, when one gets a piece of steak and a

few mouthfuls of one kind of vegetable. Then the same old hills are tackled again, only with less determination, and, with a little lolling about and more mutual diagnoses, the time wears around to a frugal dinner. Later on everybody gets a massage bath and goes to bed. Next day same old water, same old hills, and same old food. It is beneficial, but the remedy is almost as bad as the disease."

Patent Medicine Ethics.—At the meeting in Aachen of the Society for the Advancement of the Natural Sciences, H. His, Jr., advanced the following points regarding the endorsement by physicians of newly-discovered medicaments. (1) The relations between the manufacturers of and the endorsers for pharmacological and medicinal products ought to be adjusted and regulated by some central institution. (2) The signing and endorsing of such products should be for the personal information and benefit of the manufacturer, but never for publication by him. (3) Physicians should never recommend in the public lay prints newly-discovered medical products or food preparations. (4) There should be greater conservatism in the matter of subscribing to the merits of a new drug, and the publishing of such endorsement should be reserved exclusively to the technical publications and medical press. (5) The articles appearing in the medical journals should be protected as far as possible against reprint for purposes of advertisement. (6) To demand or receive pecuniary benefits from signatures, recommendations, endorsements or publications regarding new preparations is inadmissible. (7) Physicians whose inventions are set up for sale are responsible for the manner of advertising them.

CORRESPONDENCE.

OUR LONDON LETTER.

[From Our Special Correspondent.]

LONDON, October 6, 1900.

THE OUTBREAK OF PLAGUE IN GLASGOW—LIMITATION OF THE CASES—GOOD RESULTS FROM YERSIN'S SERUM—PRECAUTIONS AGAINST SPREAD OF THE DISEASE BY RATS—THE SOUTH AFRICAN HOSPITAL COMMISSION—EVIDENCE OF LORD KITCHENER—INSANITY IN ENGLAND.

THERE are now in hospital in Glasgow 24 cases of plague and 2 doubtful cases, and 88 persons are under observation. So far 6 deaths have occurred since the beginning of the outbreak a month ago. Thus it will be seen that the outbreak shows little tendency to spread. Yersin's antiplague serum has been used in the treatment with apparently great benefit. For example, a man acutely ill came under observation in the early stage. The bubo was in the axilla. Forty cc. of serum were injected, half intravenously, half subcutaneously, with the result that the temperature fell 4° F. in six hours, the swelling and tenderness round the bubo were

greatly reduced and in the course of the day passed away. Two days later the patient felt almost well and the pain in the bubo had disappeared. In another case, a man was admitted to hospital on September 9th. He had suffered for a week from headache and malaise until September 8th, when he had a rigor and sickness. He was unconscious and had a temperature of 105.8° F. In the left axilla was a group of enlarged and acutely tender glands. Twenty cc. of serum were injected into one of the brachial veins and a like quantity into the subcutaneous tissue of the abdomen. After six hours there was slight perspiration and the temperature had fallen 4° F. The pain in the axilla and the edema were less. On the following day the temperature was 100° F. and the patient felt quite well and desired to get up. Elaborate precautions have been taken against the spread of the plague by rats. At Liverpool printed instructions have been issued to the masters of all vessels trading with Glasgow. Care is to be taken that rats are prevented from boarding the vessel while in dock at Glasgow, for this purpose a man must be stationed at each gangway and beat off any rodent that evinces a desire to come to Liverpool. Should, however, a rat succeed in taking the sea trip he will find fresh difficulties confronting him at Liverpool. A man stands guard here, too, at the gangway. A number of corrugated iron sheaths are supplied for fastening round the mooring ropes so that a rat who attempts to traverse these may lose his footing and fall into the water.

The Hospital Commission has continued its sittings at Johannesburg. Lord Kitchener declared that the cutting down of the hospital transport under the order of January 29th was absolutely necessary in order to quickly relieve Kimberley. Everything was cut down. The problem was, What could be carried with the available mules? The personnel of the field hospital was not cut down and worked well. He deprecated placing transport altogether under the charge of field hospitals and confirmed Lord Roberts' evidence with regard to the supplies brought to Bloemfontein; 1680 tons of medical stores were brought up—all that was possible under the circumstances. The activity of the enemy necessitated the troops being sent out, the field hospitals had to be emptied to accompany them, causing overcrowding. Surgeon-General Stevenson explained that the men had to lie in the field hospitals in their khaki uniforms as no provision was made for supplying the field hospitals with clothes. In Bloemfontein every building was taken which was capable of being worked by the personnel. He admitted that in Kroonstadt and Pretoria there was shortness of utensils, milk, bedding, etc. He had permission from Lord Roberts to purchase everything obtainable and he spent thousands of pounds. At Pietermaritzburg another sitting was held. Mr. Bale, Attorney-General of Natal and Chairman of the Association for the Relief of the Sick and Wounded, stated that he had visited all the hos-

pitals and noticed nothing to cause complaint. He had heard that Fort Napier Hospital was unsuitable, as it was infested with vermin. He admitted that there was too much red tape. Sir William Stokes had told him that too much attention was paid to organization. Dr. Max Blieden, formerly civil surgeon in Fort Napier Hospital, said that the barracks there were full of nests of vermin. These insects were found under the patient's splints and some men suffered terribly therefrom. One enteric patient in delirium ran away saying he could not stand them. There was insufficiency of fresh milk and clean linen. The condition of the wards was sometimes scandalous. The orderlies were too few and some of them stole liquor intended for the patients.

At the annual meeting of the North Midland District Poor Conference Dr. J. M. Rhodes read a paper on "The Increase in the Numbers of the Certified Insane and the Necessity of Making Provision for Them." He said there were in England upward of 100,000 people who were legally declared of unsound mind—nearly double the number in 1869. It had been said that the rush and pressure of business is to-day so severe that there is a large increase in nervous diseases. But the Registrar-General's returns show that the ratio of deaths from nervous diseases has steadily diminished. It is true that the mortality from insanity and general paralysis of the insane has risen during the last twenty years from 68 to 114 per million, but against this may be set the fact that the deaths from the next most fatal nervous disease, epilepsy, have fallen from 117 to 85. The returns for the last ten years show that the number of pauper lunatics has been increasing by more than 2000 per annum; last year it was nearly 3000. But these figures cannot be taken as proving such a great increase of insanity. The system pursued in reference to the insane has changed. For the last twenty years there has been a growing confidence in the authorities, and consequently an increase in the number of insane placed under the control of the state. The percentage residing with relatives had fallen from 18.46 to 6.23.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

PARALYSIS OF THE FIFTH AND SEVENTH CRANIAL NERVES—INTERMITTENT ORBITAL VARICES—TUMORS OF THE BASE OF THE SKULL—FRACTURES OF THE ASTRAGALUS AND TIBIA—PYLORECTOMY FOR NEOPLASM—ULCERATIONS OF THE CECUM—RADIOGRAPHS OF THE RESULTS OF TARSOCLASIS—FOREIGN BODY IN THE PRIMARY BRONCHI—OLD DISLOCATION OF THE HIP—ADHERENT UTERINE RETROVERSION—CANCER AND QUININE—CONGENITAL DISLOCATION OF THE HIP.

GAYET, at the Société de Chirurgie de Lyon, June 7, 1900, presented a patient from his service whose history may be epitomized as follows:

First attack of suppurative otitis media about two years ago; second invasion of the disease three months ago; after this second attack occurred a simultaneous paralysis of the right trigeminus and lower segments of the right facial nerves, with insensibility of the mucosæ and skin supplied by the fifth nerve, paresis of the masticator muscles of that side, neuroparalytic keratitis, paralysis of all the muscles innervated by the right facial nerve except the orbicularis which was only paretic to a small degree, and deviation of the uvula and the tongue to the opposite side. The interest of the case lies in its pathogenesis. The cause was evidently suppuration in the middle ear with extension to the nerves directly, but no satisfactory explanation can be advanced as to why only the inferior segments of the facial should have suffered.

VINCENT said he had seen a similar case which he would later report.

RUOTTE narrated the history of a twenty-nine-year-old gardener suffering from the following symptoms of intermittent exophthalmos of six months' duration. Each time he would stoop the eye would undergo enlargement, projection forward with obliteration of the sulcus between the globe and the superior and inferior orbital margins, and with bluish soft tumefaction of all the adjoining skin. Pressure on the jugular vein reproduced an analogous condition. The ophthalmoscope showed the veins of the fundus to be slightly enlarged. The condition was evidently orbital varicosities which might have been produced by the patient's profession. If the condition increased operative interference would be necessary.

GAVET had seen several examples of the same trouble. One of his patients had sustained a fracture of the base of the skull. Large varicosities of fundus developed but vision had not suffered thereby.

VINCENT at the session of June 14th related the facts of a tumor of the base of the skull apparently springing from the antrum of Highmore without in the least affecting the nasal cavity, compromising the optic nerve of that side and filling the zygomatic fossa. It was removed by partial resection of the superior maxilla, accompanied by a very vigorous hemorrhage supposed to be from the cavernous sinus, stopped by packing. Complete cure followed. Histologically the growth was a very vascular fibroma.

OLLIER observed that such active bleeding need not involve opening a large trunk like the sinus. Vascular polypi, such as these tumors really are, bleed at the least touch. Tamponade always checks such hemorrhage in his experience. The ordinary source of these growths is the basilar apophysis, but there are many exceptions. The best, most direct and commodious access to them is gained by vertical osteotomy with plugging of the nose. Hemorrhage is then in full view and readily commanded.

DESTOT exhibited radiographs and contributed an observation of a cavalryman who was thrown

from his horse and landed on both feet. He was unable to walk and was taken in the hospital, where he was kept at rest for three months. Radioscopy showed a fracture of the astragalus and a wedge-shaped fracture of the lower end of the tibia behind it.

VALLAS stated that in bimalleolar fractures the third or tibial fragment is always due to tearing, according to Tillaux. This contribution showed that another force may operate, namely, direct pressure upward upon the tibia by the astragalus.

ROCHET added that in experimental fractures he had often produced cuneiform fragments in the tibia by violence directly in the line of the limb.

A. POLLOSSON at the meeting held June 21st brought forward a twenty-four-year-old female upon whom he had performed pylorotomy for neoplasm which was situated in the neighborhood of the pylorus and epitheliomatous in type, with three small ganglia in the lesser omentum which had to be removed. The noteworthy point is the youth of the patient who had already been three times pregnant. Not long ago he introduced another young woman who having had four children suffered from a cancer of the uterus. The query is whether oft-repeated impregnation in the young may not tend to excite cancer. Statistics show that patients in the condition of this woman with pyloric cancer rarely live three months. Since she had exceeded this he felt the operation had been of benefit, although recurrence or metastasis was almost certain.

VINCENT described ulcerations of the large intestine near the cecum which caused localized abscess and peritonitis without appendicular lesion except a little swelling. The child died without vomiting and with hypothermia. These facts deserve comparison with those evolved by Ollier and Moré-Josserand, who found that such abscesses often occur not as part of an appendicitis but as the result of perforating ulcers, whose source is in dispute, but which often resemble tuberculosis.

VALLAS recalled a case where in the presence of a moderate appendicitis a perforating ulcer of the adjoining cecum was apparent, explained no doubt by a double and extensive infection of both the cecum and the appendix. When the course of such conditions is rapid and virulent, tuberculosis is scarcely to be thought of, because it usually attacks large areas of the bowel and proceeds slowly. Vincent's case appeared to have died of superacute peritonitis such as gives no vomiting and no typical signs of the disease.

POLLOSSON raised the point that even in the case of Vincent the appendix could not have been normal because the extremity was enlarged. He recalled a patient of his, about sixty-five years old, who during the first ten days of a mild attack of probable appendicitis seemed perfectly well. Suddenly he passed by rectum a large quantity of bright blood. Recovery followed. Perhaps this bleeding was due to these cecal ulcers.

VINCENT closed by saying that histologically the appendix was normal, which proved to his mind that such ulcers of the cecum occur as an independent pathological fact.

Radiographs were shown by VINCENT of old operative cases for clubfoot by tarsoclasia. They justified his methods which had been characterized as brutal and barbarous. The function of these feet were still good after respectively five, seven, ten and eleven years since the operation. The photographs showed that he had produced fractures and subluxations about the astragalus and toward the dorsum of the foot. The observations will be published presently *in extenso*.

GOULLIQUET at the meeting of June 28th described a case in which a twenty-month-old child had inspired a nail. Through a tracheotomy wound a strong electromagnet was introduced and the nail removed. It was seen to jump from the right primary bronchus where radioscopy had shown it to be to the poles of the magnet. It measured two inches.

The same author presented a case of iliac luxation of the hip unreduced for four months. Under anesthesia several futile attempts were made to reduce the dislocation by the ordinary flexion and abduction methods. Finally the forced abduction method of Lorenz was successful. After a three-weeks' immobilization in Bonnet's gutter splints recurrence was found. Reduction was again done in the same way and after careful and more prolonged immobilization the joint remained intact and good function returned.

OLLIER said that authors give too dark a prognosis in dislocation of the hip. Not only are they reducible after several weeks but also after several months. He had returned the head of the bone to its socket eight months after its dislocation and obtained good function. In such cases very likely the head is only partially replaced, but the rule is for the resulting function to be far better than would be the outcome of a resection of the head.

VALIAS pointed out sepsis as the great difficulty in the way of opening operations for the reduction of old dislocations. He therefore advised forcible reduction in all cases as a preliminary procedure. In a patient sixty-seven years old he had fractured the neck of the femur in an attempt to replace the bone. The net result was a much improved though not normal gait.

DURAND had one failure at forced reduction which of itself passed from a pubic to an iliac type. This was the second case of the same thing he had had with a creditable result and good function in each.

OLLIER enforced the utility of these powerful manipulations for tearing down adhesions, elongating the contracted muscles and ameliorating the position of the head. One may add to these baths, continuous traction and massage, and not resort to bloody operations except when nerves and vessels are evidently compressed, and give symptoms.

FOCHIER introduced a young woman who after an abortion four years ago had suffered from pelvic inflammation and then retroversion of the uterus with adhesions. She had subjected herself to various kinds of treatment for this condition, massage and seances of columnization, etc., without overcoming the displacement or getting rid of the pain. At the laparotomy it was apparent that the adhesions obliterated the cul-de-sac of Douglas and that the massage had simply elongated the adhesions, producing a mobility of the organ and no more. The operation consisted merely in tearing away the adhesions, freeing the womb and ablating the left appendage which was inflamed. The cul-de-sac of Douglas was also restored. This case shows the probable futility in trying to restore this pouch by massage. When adhesions are extensive the uterus is merely moved until they are rendered long enough to make the pain of traction less, but the cellular tissue is simply elevated into a pointed arch while the obliterated pouch of Douglas is not changed. The retroversion as such is not cured but may be made much less painful.

GOULLIQUET thought that mere displacement of the uterus is not the cause of the pain, so much as the displacements and tractions by adhesions on the appendages.

JABOULAY on July 5th presented a patient who after a traumatism noted a tumor develop in her left breast; after ten months the skin was adherent, invaded, and at the end of last June presented the appearances of threatened ulceration, being red and glossy. The treatment was injections of quinine since the end of the month of June. The tumor had decreased to about one-third its former size, the skin had become loosened and wrinkled and enlargements of the axillary ganglia had disappeared.

FOCHIER called attention to the fact that a neoplasm at the periphery of the breast is rare, but from the description this one was probably a sarcoma of the skin.

JABOULAY said that the involved axillary nodes argued against sarcoma. Whatever the histology might be the recession of the mass had nevertheless occurred.

NORE-JOSSERAND presented to the society and described a specimen of the pelvis and hip-joints of a child on whom he had operated for congenital dislocation of the hip according to the method of Lorenz four months before it died of pneumonia and at that time exhibited to the Society. Radiographs of the conditions before operation were also at hand. The dissection showed that the muscular insertions were normal but that the muscle bellies were irregularly atrophied. The adductor magnus had been lacerated by the reduction and was the most atrophied. The pelvi-trochanteric group was also very degenerated, while the glutei appeared normal. The articulation showed these features: The socket was quite comparable to the other side; the femoral head had advanced forward considerably; the two capsules were practically nor-

mal as were also the ligaments of Bertin; undue freedom of external, marked restriction of internal rotation were present.

FOCHIER expressed surprise at the difficulty of diagnosis between infantile paralysis with hip dislocation and congenital dislocation of that joint and asked whether the former disease had been ruled out.

NORE-JOSSERAND said that he had ruled out infantile paralysis on account of the good function during the four months preceding death and of the general condition of the other muscles.

SOCIETY PROCEEDINGS.

NEW YORK STATE MEDICAL ASSOCIATION.

Seventeenth Annual Meeting, Held at the New York Academy of Medicine, New York City, October 15, 16, 17 and 18, 1900.

The first day's session was taken up by the usual business meeting of the Association.

SECOND DAY—OCTOBER 16TH.

Muscular Rheumatism and Electricity.—Dr. James Grant of Ottawa, Canada, was presented to the Association and detailed the results of thirty-five years' experience with muscular rheumatism. He concludes that it is due to the accumulation in the body, not of urea, but of abnormal electricity. This theory is confirmed by success in the treatment of the disease. If ordinary needles are inserted into the rigid muscles affected by lumbago, or pleurodynia or torticollis this abnormal electricity is conducted off and the muscles become pliant and painless. If, when these needles are first inserted, they are connected with a sensitive electrometer the needle is sensibly deflected. On a second insertion after a few minutes no deflection is noted. The needles are left in place only a few minutes.

Nervous and Electric Conductability.—Dr. A. D. Rockwell of New York called attention to the striking analogy that exists between certain electric phenomena and nervous phenomena. Since the announcement of the neuron doctrine, this analogy has become even closer than before. The conditions that make a tube of iron filings a good conductor, though a moment before it was not, are strikingly similar to those which obtain in nervous conduction. As electric conductability is disturbed by untoward conditions, so nervous conduction is disturbed in hysterical states, in paresthesia, in mental confusion, and the like. Certain of these neurotic conditions promptly disappear under electricity. This might be expected from the analogy cited. That which is needed is detailed study of the relations between high-tension and high-frequency electrical fields and abnormal nervous conditions. In electricity is to be found the best agent for the treatment of these trying and obstinate states, and the future is bright for advance in these lines.

Cocainism.—Dr. T. D. Crothers of Hartford, Conn., said that cocaine is now sold freely at drug-stores and grocery-stores and even by tramp pedlars, so that its habitual use is becoming much more common than it was. Dentists, druggists, eye specialists, and throat and nose specialists have been the victims of the habit up to this. Now it is spreading among the lower orders. Habitues, when they cannot obtain it otherwise, steal to get it. When deprived of it in prison they become delirious, even violent. A number of cold and catarrh remedies contain cocaine in such quantities as to be dangerous. In a mill town in Connecticut, where the mill operatives suffer from dust, over 100 people were found to be taking a strong cocaine preparation.

Symptoms of Cocainism.—Many of the symptoms are deceptive. Some of them resemble those of paresis and occasionally such patients find their way to insane asylums. A certain diffuseness of speech is a characteristic of cocaine victims. Clergymen preach too long sermons. Lawyers wander in pleas. Medical professors wander from the point. Hallucinations of persecution especially are frequent. Most cocaine victims carry concealed weapons. The treatment is immediate withdrawal of the cocaine. Bromides often help the symptoms that result. Patients should as a rule be sent away from home for cure.

Points in Heart Diseases.—Dr. James J. Walsh of New York read a paper on some practical points from the discussion on heart diseases at the last International Medical Congress. According to the statements of a number of good observers, valvular lesions of the heart are not so absolutely incurable as they have usually been considered. Petrowich reported a series of cases in which the heart lesion had existed for some time and gave constitutional symptoms as well as physical signs, and yet under a course of small doses of the iodides and precordial applications of the actual cautery the lesions disappeared. The treatment must be kept up for at least a year and in one case it was three years before the cure was complete. Professor Potain said that in young people such a course of treatment should always be carried out and that cures are not infrequent.

Painful Heart Conditions.—For the cardiac discomfort which often accompanies arrhythmia a number of observers insisted that, while digitalis very seldom does good and often seems to do positive harm, strophanthus acts very satisfactorily. One of the most prominent of French heart specialists insisted that strophanthus is the ideal heart tonic to use whenever a painful cardiac affection is present. It soothes the pain even though it may fail to correct the disturbed rhythm. While it was agreed that the most prominent cause of heart disease is rheumatism, doubt was expressed as to whether the cardiac lesion is always due directly to the specific cause of the rheumatism or is not still more frequently due to a secondary infection occurring as a com-

plication of the rheumatism. Rheumatic conditions seem to predispose individuals to easy invasion by various micro-organisms. A number of germs have been described as occurring in valvular rheumatic vegetations. Our present knowledge in the matter emphasizes the necessity for the most careful antisepsis of the digestive tract during the course of a rheumatism, for from here secondary infections occur. Tobacco as a factor in the production of heart diseases is attracting more and more attention. A number of cases were reported in excessive smokers in which all the other ordinary causes of heart disease had been carefully excluded. The frank conclusion was that, in susceptible individuals when used to excess, tobacco alone can produce sclerotic conditions in the arteries and heart itself which finally give the physical signs and the functional symptoms of an organic heart lesion. Heredity as a factor in heart diseases also seems to be given more thought than heretofore. Not that direct heredity of an acquired characteristic is presumed, but that a certain lack of vital resistance in the heart seems to be a feature of the physical constitution of certain families.

SYMPOSIUM ON OBSTETRICS.

Management of the Prepuerperium.—Dr. Edward P. Davis of Philadelphia said that the most important thing to watch during the months immediately preceding labor was the urine. The amount of urine should be carefully noted from time to time, and for this it is well to give the patient explicit instructions that the urine of the whole twenty-four hours shall either be faithfully preserved or carefully measured. It is not sufficient to take the woman's assurance that she is passing as much urine as usual. After the amount of urine, its specific gravity is most important; then the sediment of the urine should be carefully examined. The character of the epithelial contents should be carefully noted and any debris indicating kidney disintegration taken into account. Of course, casts should be carefully looked for. Albumin is only of importance if in very large amounts, or if it is accompanied by other signs of kidney trouble. Blood in the urine is pathogenically significant. When sugar is found, if in the later months, it may be no more than lactose reabsorbed from the milk. In some women glycosuria indicates only a highly neurotic condition and is not pathognomonic of diabetes. It is being realized more and more in recent years that the liver is an important manufactory of many excretory products that afterward appear in the urine. The hepatic condition therefore should be carefully followed.

Diet in Pregnancy.—For the heartburn which is so common a complaint during pregnancy a limitation of the diet is perhaps the best remedy. Milk should be taken in considerable quantities and, if it causes any gastric discomfort, it may be mixed with Vichy or some other carbonated water. As a rule, meat should not be taken

more than once a day. It must be borne in mind that coffee and tea check excretion and their use in any quantities during pregnancy should be discouraged. Many a nervous symptom or complaint of pain will disappear if coffee and tea are not taken. On the other hand, there is danger in limiting the diet too much, for the woman's strength must be thoroughly preserved. Plenty of ripe fresh fruit should be taken, and if this cannot be obtained stewed fruit, or preserves not too sweet, or canned fruit. At least one quart of water should be taken a day internally, and, externally a cool sponge bath in the morning and a warm bath at night. For nervous restlessness and insomnia there is nothing more soothing. The pregnant woman should be a great deal in the open air and the house should be well aired.

Drugs.—For symptoms of toxemia salines should be employed—preferably those without potash. Calomel is the best stimulant of excretory processes that we have; 1/20 of a grain may be given night and morning, or 1/100 of a grain three times a day for weeks without producing any mercurial symptoms. Bromides should not be given, because they check eliminative processes and these should rather be encouraged. If hypnotics are necessary, chloral or one of its derivatives is the best. Muscular exercise is of importance. Perhaps the best form of exercise to develop the abdominal muscles is scrubbing on the knees, but from this most of our patients are precluded and walking remains the best general exercise. Compression of the abdomen by a tight bandage or support forces the child down into the pelvis, but weakens the abdominal muscles and sometimes does not give suitable opportunity for the accommodation of the fetal parts to the pelvis. If there is any discharge it should be treated very carefully before labor begins.

Normal Labor.—Dr. Austin Flint, Jr., of New York County said that the most important preparation for labor is to have the patient do considerable walking up to the time labor begins. This softens the lower segment and makes labor much easier. When the doctor is called he should after careful sterilization of the external parts of the woman and of his own hands make an examination that satisfies him as to the exact state of affairs. It is much better to make one good examination than a number of incomplete ones. After this the nurse should be given instructions to see that the patient empties her bladder every hour. An antepartum douche seems according to statistics to do harm rather than good. When the pains become severe, ether should be given in small amounts. This drug seems to be replacing chloroform to a great extent for this purpose. When the first stage of labor is approaching its end it is Dr. Flint's custom to help the dilatation of the cervix by digital manipulation if it seems to be proceeding too slowly. Of course, the bag of waters should be preserved as long as possible, especially in pri-

mipara. Many methods are suggested for the preservation of the perineum. The important thing is to discontinue dilatation by intervals of pressure and then of rest during which a restoration of the circulation takes place. The child's head is the best dilator. If it is being pressed down upon the perineum too rapidly an anesthetic may be employed. The application of the low forceps will help to save many a perineum. If the pains become slow, withdraw the anesthetic and stimulate. For this purpose alcohol should be given, but ergot should never be used. When the forceps are applied, traction should be made intermittently in imitation of Nature's method, so as to permit of a return of the circulation after pressure has been put on the muscles of the perineum. As soon as the head is born the mouth and eyes should be washed out. There is no need to insist upon this precaution with regard to the eyes. With regard to the mouth, however, this practice will be found to save the child many a morbid respiratory condition during the early days of life.

Third Stage of Labor.—The blood should be allowed to escape from the placenta, as this decreases its bulk and permits its expression sooner by the uterus. Any tears that occur in the genital tract should be repaired at once as far as possible. Careful examination of temperature charts of puerperal women will show that the cases in which there is no rise of temperature and no morbid symptoms are those in which there has been no laceration of the genital canal. This is very important, for the infective material growing in tears in the lower genital tract may very well prove the source of contagious material that will invade structures higher up and produce a general septic condition.

After-Treatment of Normal Labor.—Dr. George W. Jarman of New York County said that in women of lax fiber the uterus often presents a tendency to relaxation. Hemorrhage into the cavity of the uterus takes place as a consequence and proves not only weakening, but gives considerable trouble afterward because of the painful expulsion of clots. Where the uterus is not firmly contracted after the delivery of the placenta, the binder should not be put on for half an hour and the uterus should be rubbed through the abdominal wall. It is well to give a dose of ergot immediately after the delivery of the child. If the uterus does not contract firmly after these manipulations a hot intra-uterine injection may be given. The vulva should be kept covered by a rather thick pad of antiseptic cotton. As a rule the binder should be used, partly because of the prejudice in favor of its use as regards the preservation of the figure. The vulval pad should be changed very frequently during the first twelve hours. The child should be allowed to nurse as soon as it and its mother are washed and dressed. The nursing is good for the child and acts reflexly on the mother to produce a firm contraction of the uterus. Even in perfectly normal cases there will be sometimes a

rise of one to two degrees in temperature as the result of the nervous excitement and fatigue. If the urine is slow to come, hot cloths should be placed on the abdomen. If necessary, a sterile glass catheter should be employed and the nurse should be instructed to pass it by sight under due precautions. After the third day the woman should be allowed to sit up in bed to urinate. In case nervous excitement causes insomnia sodium bromide may be used as a sedative. Until the bowels have been freely moved a liquid diet should be exclusively employed. If the bowels are not moved freely of themselves, a gentle laxative should be given from forty-eight to sixty hours after the labor. As good as any is the time-honored castor oil. It is to be remembered that coffee will lessen the milk secretion if it is excessive. If all women understood that mammary abscesses are not the result of cold or of caking, but always come from fissures of the nipples, much more care would be taken of the nipples and there would be many less mammary abscesses. The woman should be taught to lie on her side as much as possible as this more surely protects her from retroversion of the uterus. As to getting up it is not a question of days, but of conditions. As a rule after seven to eight days, if the patient is well, she may sit up in bed. A day or two later, when there is lochial discharge, she may be allowed to get up into a chair. If the red flow returns she must be put back to bed at once and must not be allowed to get up again for two or three days.

The Newborn Child.—Dr. Bernard Cohen of Erie County said that as soon as a child is born it should be placed on its right side in order to favor the closure of the foramen ovale. Its face should be turned from the vulva to avoid any gush of fluid, and it should not be placed too far away, in order to avoid traction on the cord. The cord should not be ligated at once, but as much as possible of the placental blood should be allowed to find its way into the child's circulation. If but a short stump of cord is left less material is present to dry up and there is less danger from manipulation. The mouth of the child should be cleansed with a piece of soft sterile rag on a clean finger. In dressing the child a tight band should not be put on. After the cord has dropped it would be well not to use the usual belly-band. It is supposed to prevent umbilical hernia, but in reality it favors it by weakening the abdominal muscles. Many nurses have the custom of giving the baby a little warm water in sugar. This serves as a gentle laxative and is as good as anything else until the mother is able to nurse. For constipation after nursing has begun water and sugar may prove laxative, or a little manna may be administered.

Ophthalmia Neonatorum.—Dr. John Weeks of New York County said that at times the infection of ophthalmia seems to be antepartum. When the first symptoms become manifest more than three days after the labor, it is practically certain that the infection has come from a source other

than the genital tract of the mother. At times, of course, the ophthalmia of the newborn is due to anomalies of the tear sac. Usually if the symptoms develop before the fourth day the infection is due to the gonococcus of Neisser, no matter how mild the symptoms are. Cases that develop later are not due to the gonococcus. Knowing as we do now how long gonococci may persist in males and also in females, it is very easy to understand how gonococci may be present in the genital tract of the female long after the father or mother has had an acute attack of gonorrhea. The other microbes that occur on the conjunctiva of the newborn are the pneumococcus, the bacillus of acute conjunctivitis and the Klebs-Löffler bacillus. According to the statistics of the American Ophthalmological Society, out of 50,000 blind in the asylums of this country 5000 owe their misfortune to ophthalmia neonatorum.

Prophylaxis.—Statistics show that prophylactic precautions will reduce the number of cases of ophthalmia very materially. Out of 17,500 newborn children in various maternity hospitals in New York where no prophylactic precautions had been taken about 9 per cent. developed some ophthalmia. Credé at Dresden demonstrated that in 12,000 cases treated by his method, that is, by the instillation of a drop of a two-per-cent. nitrate of silver solution immediately after birth, less than 1 per cent. developed ophthalmia. Others have suggested washing out the eyes of the newborn with a dilute sublimate solution or carbolic acid solution, or with sterile water. None of these agents have given nearly as much satisfaction as the nitrate of silver. This measure may be employed immediately after the child's bath and should always be employed if there is the slightest suspicion of an abnormal discharge, however slight, in the mother. When the disease develops attendants should be warned at once of its contagiousness. The other eye should be protected by frequent cleansing. Protective shields give no satisfaction in infants. The reason why any conjunctival condition in a child is apt to become severe is that there is very little lacrimal fluid and hence the pathological material is not washed off. This gives the primary indication for treatment, frequent cleansing of the eye. The second indication is found in the biology of the gonococcus. This germ as well as the microbe of acute conjunctivitis does not grow well at a temperature lower than 92° nor above 110° F. It is not easy to raise the temperature of the eye, but it is comparatively easy to lower it to 90° F. and so prevent the luxuriant growth of the bacteria. The prognosis in any given case depends on the general health of the child. Healthy children's eyes can be saved even when very bad.

Major Obstetrical Operations.—Dr. Edward Reynolds of Boston said that version and high forceps for contracted pelvis give practically no more mortality for the mother, but a mortality of 50 per cent. for the child. Induced labor has

about the same statistics, about 50 per cent. of the children dying before they reach the age they would have attained had they been born at full term. The Cesarean operation has a mortality of from 35 to 40 per cent. Unfavorable cases, that is, women who are exhausted by having been days in labor, are much more unfavorable while favorable cases have a rather low mortality. With the Cesarean operation the child is nearly always saved. In symphysiotomy the mortality is only slightly larger in unfavorable than in favorable cases. This is easily explained because there is practically no shock. The fetal mortality in symphysiotomy is not very low, however. The principles that must guide the general practitioner, according to Dr. Reynolds' experience in 22 successful cases where major operations were necessary, are as follows: Use forceps or version if possible; if not then the Cesarean operation is better than prematurely induced labor if it can be applied in favorable cases. In unfavorable cases symphysiotomy must be the operation of choice if the mechanical conditions in the pelvis will permit it. If the mechanical conditions will not permit it, then the child's head must be crushed. It is better to save the potential mother of many children, rather than to sacrifice her for her unborn fetus. In order to secure most cases under favorable conditions, the woman's condition must be discovered before labor. Whenever a primipara is abnormally small in stature, or suffers from any deformity of the hips or legs, the general practitioner should call in a consultant if he does not feel equal to pelvimetry.

Puerperal Sepsis.—Dr. William R. Pryor of New York County said that sepsis is due in only a very small proportion of cases to autoinfection. It is known that forty-nine per cent. of prostitutes and a certain number of maritally-infected women have persistent foci of gonococci in the glands of their cervix. These may suffer from self-infection. Certain pregnant women have purulent foci in their tubes. But these very rarely cause puerperal sepsis, because they produce either sterility or give rise to early abortions. Most of the infection comes from without. The only scientific method of treating puerperal sepsis is to examine the secretions carefully in order to find their bacterial contents. This secretion must be obtained, not at the vulvar orifice, but from the cul-de-sac of the vagina through a sterile tube. In about one-third of the cases the infection will be found to be due to streptococci. In a certain number of cases pyogenic cocci will be found, while in most cases only saprophytes occur. Intermittent washing has been used on general principles for all cases of puerperal sepsis. In the pyogenic and streptococcic forms it will be found to do very little good. Saprophytic infection will at once begin to improve under this treatment. Marmorek's serum will be found to do very little good even in cases of streptococcic origin. It is now known that there are many varieties of streptococci and

one cannot be sure which variety is present nor can one be certain of having the antitoxic serum for that special variety.

Treatment of Puerperal Sepsis.—For septic thrombosis the removal of the uterus often does good. This is the only form of puerperal sepsis in which hysterectomy is ever indicated. For other forms of sepsis Dr. Pryor has tried with very satisfactory results this method: The uterus is first thoroughly curetted and then Douglas' pouch is opened and iodoform gauze is packed tightly around the uterus. In a few hours iodine will be found in the urine and this seems to have a good effect on the toxins in the blood. If the pulse rises to 120, three quarts of normal salt solution are injected intravenously. By this many seemingly hopeless cases can be saved.

SYMPOSIUM ON THE BLOOD.

Points in Technic.—Dr. Edward K. Dunham of New York County detailed the technic of blood examination, dwelling especially on certain less frequently used methods of investigating blood composition which have come to notice in recent years and which promise to be of service for the clinician. With regard to the taking of specimens Dr. Dunham insists especially on the most scrupulous cleanliness. Cover-glasses or slides should be washed in water, in bichromate of potash solution, in sulphuric acid and in alcohol and ether. Only thus can all dirt and grease be removed from them.

Specific Gravity.—To determine the specific gravity of the blood a drop of it is placed in a mixture of chloroform and benzol. If the drop of blood floats on the surface of this mixture its specific gravity is higher than it and benzol is added until the blood sinks. If it goes to the bottom then chloroform is added until in either case the drop of blood eventually floats freely in the chloroform-benzol mixture. When it does so, it is of the same specific gravity as the mixture, and this is determined by an ordinary hydrometer. Usually at the beginning of the observation the chloroform-benzol fluid is taken of the ordinary specific gravity of normal blood. The reason for this special mixture is that the blood remains entirely coherent in these fluids, that is, it is not dissolved or diffused in the mixture, but floats as a more or less spherical body. This determination requires absolutely no apparatus, but takes considerable manipulation and some practical familiarity with the method or a good deal of time is consumed. Specific gravity may be determined by direct weighing. For this a capillary-tube is filled first with water, then weighed very exactly on a delicate balance; then carefully cleansed and dried, refilled with blood and again weighed. Comparison of the two weights gives a ratio from which the specific gravity of the blood can be easily decided. The method is very simple, but it requires an accurate balance weighing to one-tenth of a milligram.

Reaction of the Blood.—This is often thought to be of special significance. Its determination

is not difficult, but it requires very delicate reagents. Usually a solution of tartaric acid is added to the blood until it is just neutralized. The point of neutralization is determined by very delicate litmus paper. To do this exactly requires familiarity with the use of the chemical reagents for such determinations.

Rapidity of Coagulation.—In recent years it has often been thought desirable to know the rapidity with which the blood coagulates. Certain points in prognosis, especially in gall-bladder operations when patients have suffered for a long time from severe jaundice, are said to be dependent on the coagulability of the blood. It may be determined rather easily as follows. A capillary-tube is taken, the lumen of which is something less than $1/25$ of an inch. In this some blood is allowed to flow and then a clean white horsehair is passed through the column of blood in the tube. As long as the horsehair on being removed from contact with the blood remains colorless, no coagulation has taken place. As soon as the blood clots it becomes covered with a red color.

Hemoglobinometry.—Dr. Dunham showed the instruments of Gowers, Fleischel, Oliver and Baer. He stated that these determinations of the hemoglobin by means of comparison of colors are open to several sources of error. One is that diffusion of the coloring matter of the blood does not always take place in the same length of time. When the observation is made this diffusion is often not complete and the reading of the amount of hemoglobin is necessarily lower than it should be. Baer attempted to remove this source of error by making his color comparison with the undiluted blood. Another source of error is the personal equation in the appreciation of tint agreement. This amounts to at least five per cent.

The Ferrometer.—Hemoglobinometric methods are open to certain seemingly inevitable objections and the attempt is being made to obviate them by determining, not the color of the blood, but the amount of iron in it. The iron present represents very nearly the amount of hemoglobin. Some of the metal, it is true, is dissolved in the plasma, but this is not enough absolutely to vitiate ferrometric conclusions. To determine the amount of iron the blood is evaporated, the residue incinerated and the fused ash dissolved in bisulphate of potash solution. To this a sulphocyanide is added so that a ferrocyanide is formed. This gives a distinct color to the solution, which is then compared with a solution of ferrocyanide of known strength.

Leucocytosis in Surgery.—Dr. Joseph C. Bloodgood of Johns Hopkins University said that the presence of leucocytosis in acute abdominal surgery can be of the greatest service by enabling the surgeon to make a definite diagnosis a few hours earlier than would be otherwise possible. As hours are precious in abdominal surgery this promises to be a valuable aid in the near future. In three conditions especially is the determination

of the presence or absence of a leucocytosis important: They are appendicitis, peritonitis, and intestinal obstruction. In acute purulent conditions leucocytosis rapidly ascends. Even in simple non-purulent so-called catarrhal appendicitis there is distinct though not very marked leucocytosis. In gangrenous appendicitis, or where the appendix is distended with pus, the leucocytosis rises rapidly.

Peritonitis.—At the onset of the peritonitis there is an immediate rise in the leucocytosis. This becomes very high when the peritonitis is of a virulent character. Very often after perforation of the intestine there is rapid fall in the number of leucocytes. If the leucocytosis continues high for the first 36 hours, it is of no special significance in the prognosis. If, after 36 hours, the leucocytosis persists, the prognosis is good and nature is going to triumph over the infection. In cases that are to be fatal there is a drop in the leucocytosis after 36 hours.

Intestinal Obstruction.—Cabot of Boston asserted some time ago that in intestinal obstruction there is no rise in the number of leucocytes. Leucocytosis has usually been found in these cases at Johns Hopkins. In obstruction with gangrene the leucocytosis rises very high. The higher the leucocytosis the shorter time it takes to rise. Further details of this paper will appear later in the MEDICAL NEWS.

Pernicious Anemia.—This paper was read by Dr. Alfred Stengel of the University of Pennsylvania (see p. 603).

Leukemia.—Dr. C. Y. White of the University of Pennsylvania said that leukemia is a form of anemia characterized by the presence of a very large number of white blood-cells and a reduced number of red blood-cells. All the forms of white cells in the blood are increased in number, but not all of them equally. This gives rise to certain types of leukemia. Two special forms of cells have been described as occurring in leukemia—the neutrophilic myelocytes and eosinophilic myelocytes. The presence of these cells, however, is not pathognomonic of leukemia, for they have been found in other blood disturbances and in certain infectious fevers. The study of the microscopic character of the blood has led to a division of leukemia into two types, *vis.*, the spleno-myelogenous and the lymphatic forms of the disease. Spleno-myelogenous leukemia is really a pernicious anemia with an increase of the white cells and the presence in considerable numbers of the neutrophilic and eosinophilic myelocytes. Lymphatic leukemia presents less degeneration of the red blood-cells and less disturbance of the normal form of the white cells and of the proportion between the different forms of white cells existing in normal blood. In a word there is less disturbance of the blood-making organs. It is evident that further study of the minute characters of the white blood-cells will enable us to draw more definite conclusions as to the course of cases of leukemia and their ultimate prognosis.

Treatment.—Practically the only remedy that has done good in certain cases of leukemia is arsenic. It should be given in increasing doses as the tolerance of the patient will permit and should be continued for long periods of time, but with interruptions in order to avoid the production of complications that sometimes follow the arsenic treatment. It seems worth while noting that in two cases of leukemia in which abdominal operations were done there was for a time after the operation a reversion to the normal number of leucocytes in the blood.

Parasites in the Blood.—Dr. Leon T. LeWald of New York County read a paper with this title. He pointed out and illustrated the distinctions between the germs *Culex*, non-malarious and *Anopheles*, the malarial carrier. This paper will appear in a future issue of the MEDICAL NEWS.

Blood Examination in Trichinosis.—Dr. H. C. Gordinier of Rensselaer County read a paper on this subject. It is only within recent years that the value of a differential blood-count has been recognized. A great increase in the eosinophile cells is characteristic of this condition. This paper will appear in a future issue of the MEDICAL NEWS.

THIRD DAY—OCTOBER 17TH.

Address by Dr. Charles A. L. Reed.—It affords me extreme pleasure, as President of the American Medical Association, to acknowledge your cordial greeting. I recognize and accept it as an expression of filial devotion to the National organization, which, for the time being, I have the honor to represent. My pleasure is intensified, however, because I find in your charter, a copy of which has been placed in my hands by your efficient Secretary, a declaration of objects or principles which appeal to me with peculiar force. They are more comprehensive than those usually embraced in the fundamental laws of medical associations. The first two that are enumerated—the advancement of our humane sciences and the maintenance of honor and character in our ranks—are themselves sufficient to commend this organization to the good favor of every practitioner in this Empire State. The third, providing as it does for the beneficent protection of brethren who have fallen in the great strife, must touch a sympathetic chord in the bosom of every physician who appreciates the mutability of fortune. In no calling of life may misfortune come more swiftly, more relentlessly, than in that devoted to the welfare of humanity. It is the irony of experience that often he who most needs succor is the Samaritan himself. Your example, therefore, in this regard, is worthy of emulation by every State medical association in the country.

I am, however, on this occasion particularly interested in the fourth plank of your platform. I allude to that statement which declares that one of your objects is the establishment of harmonious relations, as the charter itself declares,

"the establishment and furtherance of cordial professional relations and fellowship between the medical profession of the State of New York and the medical profession of other States of the United States and of foreign countries through the medical associations and societies of such States and countries."

Criticism of that declaration must exhaust itself in commendation. In it are embodied what should be recognized as the essential elements of medical organization throughout the profession. It is a hopeful sign that such a broad catholic principle should have been enacted into law by the legislature of a great State, and should have been voluntarily subscribed to by the vigorous, progressive and enlightened men assembled in this hall. I like to think of all that is implied by this part of your splendid organic laws. It breathes the spirit of harmony. It means, if it means anything, and it does mean, as it should mean, the union of the medical profession of New York. It means, as it should mean, that every member of this organization should become a member of the American Medical Association—and I am gratified to know that many already sustain that relation. And finally, it means, as it should mean, that, over and above all, you stand consecrated to the union and the solidarity of our great National profession. Your initiative will meet with a hearty response, not only from the American Medical Association, but from the great independent body of the profession. The genius of harmony, of unity, of fraternity, is abroad in our ranks. It will brook no opposition. Yet this movement is not revolutionary; it is, rather, the culmination of another stage in the resistless evolution of our profession. It ought, therefore, to take but little time and less effort in which to make a change which, in sentiment, is already accomplished. There is but little necessity, the country over, for rescinding resolutions, altering by-laws or amending constitutions, although some memories may well be effaced and possibly some conventions, that have honorably served their day, but that are now relatively meaningless, may well be either modified or revoked. He who interposes either prejudice, preference or prerogative as obstacles to this consummation must be recognized and treated as the enemy of progress. Organization, and organization, too, in the direction of union, must advance. The dissemination of science, the advancement of professional standards, the maintenance of a wholesome *esprit de corps*, the promotion of benevolent enterprise, and the increase of the power of the profession at Albany, at other State capitals and at Washington, all depend upon it. This, and more, is clearly implied by your splendid declaration of purpose, and I come to tell you that the profession of the entire country is with you. I am convinced, and I have reasons for my conviction, that the profession, acting through its organized bodies, is ready and anxious to take steps that will enable it to present a united front to the dawning century.

Diphtheria and Milk Supply.—Dr. Chauncey P. Biggs of Tompkins County gave some details of twenty-eight epidemics of diphtheria the origin of which had been traced to the milk supply. Of these ten followed the distribution of milk that had been handled by some one connected with a family in which diphtheria existed. Eighteen epidemics were reported in which the source of infection seemed to be the existence of chapped teats and ulcerated mammae in the cow. In England, according to Dr. Lennox Browne, diphtheria of the lacteal structures in the cow is called chapping. In the District of Columbia three milk epidemics of diphtheria were traced in which a dairy-maid, a dealer, and a milk-wagon driver were affected by diphtheria. From Germantown an epidemic is reported in families of good sanitary surroundings who had no intercourse with one another and whose only community of interest was the same milkman. In such epidemics the milk-drinkers in a family are the only ones attacked originally. Members of families who drink only boiled milk escape.

Diphtheria in Small Towns.—Prof. Veranus A. Moore of Cornell University showed that the spread of diphtheria can only be prevented by quarantine carefully maintained until the bacterial examination of the throats of those who were affected have been negative in three consecutive cultures. For this a bacterial station is absolutely necessary. It is not difficult, however, in a country district to have such a station in some centrally-located town to which the cultures can be sent for examination. These culture methods make it possible to trace the course of epidemics of diphtheria and also to find their origins. Such data will soon enable us to limit very much the spread of diphtheria. Prof. Moore has found that the bacilli of the disease remained in throats on an average of fourteen to twenty days. The longest time after an attack that virulent diphtheria bacilli were found in the throat was fifty-three days.

Tonsils as Portals of Infection.—Dr. Julius Ullman of Erie County said that in recent years we have come to realize more and more that the tonsils are the gateway for many infections. The connection between affections of the tonsils and rheumatism and various forms of endocarditis was pointed out. The constant presence of many pathogenic germs in the mouth gives a very favorable opportunity for the invasion of bacteria whenever a reduction in resistive vitality occurs. The frequency with which chancres of the tonsil occurs shows how liable to infection are the open mouths of the tonsillar crypts. All types of cocci have been found in the tonsils and there is no doubt that many forms of tonsillitis are not only infectious but contagious. Many sore throats are followed by nephritis and it seems probable that many an insidious Bright's disease that makes its appearance suddenly in later life is the result of a sore throat in early years.

The Throat Rheumatism.—Dr. Jas. J. Walsh of New York County in the discussion said that,

while rheumatism is now generally conceded to be an infectious disease, its specific cause is unknown. It is known, however, that rheumatism predisposes its victim to secondary infection by other bacilli. To these rather than to the rheumatism itself many rheumatic complications are due. Even the heart disease is now often attributed to this. The secondary infective bacteria find their way in through the digestive tract and not infrequently through the tonsils. There is need, therefore, that the mouth should be frequently cleansed.

Diphtheria and Pneumonia.—Dr. Delancey Rochester of Erie County described a case in which sore throat found to be of diphtheritic character was accompanied by the symptoms of bronchitis. The diphtheria grew better under antitoxin. The pulmonary condition developed and a typical case of pneumonia ran its course. Another case was of an almost similar character. They illustrate the necessity for employing all means of physical examination wherever suspicious accessory symptoms suggest that the diagnosis is incomplete.

Scarlatina.—Dr. Delancey Rochester described three cases in the children of one family during the course of an epidemic of scarlatina. None of them presented any rash, but there was the typical disturbance of pulse-respiration ratio. In a warm bath the skin reddened very easily. All of the children desquamated after several weeks. These cases show how easy it is to miss slight cases of scarlet fever and so permit spread of the disease. During epidemics all febriculæ in children should be suspected.

Jonnesco's Operation.—Dr. Marcel Hartwig of Erie County reviewed the status of the neurectomy of the cervical sympathetic which has been popularized by Prof. Jonnesco of Bucharest. It has now been used for a number of different pathological conditions. Jonnesco himself operated in 97 cases of severe epilepsy, 15 of which were improved. In exophthalmic goiter 15 cases have been operated on, one of them unilaterally followed by unilateral improvement. Of the 14 remaining cases 10 were cured and 4 improved. In glaucoma the operation has given particularly good satisfaction. It is best adapted to those cases in which iridectomy does no good. It is followed by improvement of vision even where iridectomy has failed to bring improvement. Thus far 12 patients have been operated on for glaucoma and in no case has the operation failed to give improvement while in some the effect has been marvelous. Operations for the removal of the cervical sympathetic have now been done for over five years. In no case have the dreaded physiological consequences that so many anticipated been observed.

Climate in Tuberculosis.—Dr. Clarence G. Campbell of New York County said that in the present enthusiasm for sanatoria for the tuberculous it was sometimes lost sight of that climate is the most important factor in the successful treatment of tuberculosis. Patients whose circumstances permit will find their surest

benefit in a region where air and sunlight and freedom from germs make the conditions most suitable for health. Such a climate is Arizona, where sunshine is abundant, where irritating dust particles carrying bacteria are infrequent, and where at low altitudes conditions of dryness obtain that can be secured at similar altitudes nowhere else. This tract of low-lying valleys of great dryness is the characteristic climatic condition that makes Arizona suitable for consumptives. The temperature of many parts of the State is too warm in the summer months, but then patients can change their habitations to go farther North. A yearly change of this kind always does good in any climate.

President's Address.—Dr. E. D. Ferguson of Rensselaer County then delivered the presidential address, the subject of which was umbilical hernia. During the year he has had occasion to operate on several large umbilical hernias. He found that the ordinary method of reducing the sac and then bringing the edges of the umbilical opening together, in the hope of making a radical cure, was often a failure, because too much tension was exerted on the stitches in bringing the sides of the opening together and it was impossible to secure firm union. By large hernia he does not mean any particular size, but refers to those in which, after the contents of the hernial sac are reduced, it is very difficult or impossible to bring the edges of the hernial ring in apposition. Having to operate on one of these cases, he found that there were tissues lying alongside the umbilical ring which he could use as flaps to cover the opening. He made an incision, about five inches long, at the outer edge of each rectus muscle, the middle of the incision being at the umbilicus. This incision cut through only the outer sheath of the rectus muscle. Transverse incisions were then made and the sheath lifted up from the muscle. This gave two flaps of aponeurotic tissues which could easily be united in the midline by shoemaker's sutures. These flaps, being attached normally where the circulation is rather good, gave very healthy tissue thoroughly capable of bearing the strain that might be put upon them by internal abdominal pressure. Several months after the operation Dr. Ferguson noticed a slight tendency to relaxation of tissues at the lower part of the apposition of the flaps. It is here particularly that a series of transverse interrupted sutures must be carefully put in in such a way as to be secure and yet avoid strangling the tissues. The skin was incised once more and these sutures were put. The case has since been doing very well. During the second operation an excellent opportunity was afforded to examine the flaps and the state of union. Every thing was found firm and solid.

SYMPOSIUM ON TUBERCULOSIS.

General Etiology.—Prof. Victor C. Vaughan of the University of Michigan said that it is now generally conceded that tuberculosis is always due to the tubercle bacillus which was described

by Koch about twenty years ago. Certain questions of etiology, however, still remain open. The bacillus tuberculosis is known to be parasitic in animals, but there is a doubt as to whether it might not occasionally be saprophytic, that is, capable of living on dead material. At first the morphology of the tubercle bacillus was considered to be that of a simple rod. Branched forms of the bacillus have, however, been found and in a series of cases it has been known to assume a form similar to that of the ray fungus. At first these branched and radiate forms were thought to be degenerate types of the organism, but they have been found to occur even when injections are made intra-arterially, indicating that they are forms with very special vitality. An opinion has been growing of late that the tubercle bacillus is really a type of a higher fungus. A number of bacilli have been found that resemble it. A pseudo-tubercle bacillus has been particularly described which occurs very frequently in butter and which cannot be distinguished except by inoculation experiments. A bacillus that has all the staining characteristics of the tubercle bacillus occurs in timothy hay. This bacillus is, however, not pathogenic for man, or at least only very slightly so, and the lesions that it produces do not resemble those produced by the tubercle bacillus. It has therefore been assumed that the tubercle bacillus is a pleomorphic fungus at times pathogenic, at times not; at times saprophytic, at times only parasitic. The conversion of the non-pathogenic form into pathogenic varieties has been looked for, but has not yet been found. It is probable, however, that the tubercle bacillus we know is only parasitic. It may have certain relatives, like the pseudotubercle bacillus or the timothy bacillus, that belong to the same family, but are never convertible into it. After all, edible and poisonous mushrooms belong to the same general order of plants, and yet no botanist claims that any innocent form ever by any chance becomes poisonous.

Animal Tuberculosis.—Animal tuberculosis occurs only where the disease can be contracted from other animals that have the affection. More than this, it is contagious only when the tissues are broken down and the animals are casting off the infective material. Tubercle bacilli never exist in expired air, unless little droplets of mucus or saliva are coughed or sneezed up. As is known it is acquired by transference from animal to animal. A number of epidemics have occurred as a consequence of circumcision. Tuberculosis frequently invades tattoo marks from infected saliva. In a number of cases surgeons have inoculated themselves during operations upon tuberculous subjects. These unconscious experiments are as convincing as experimental inoculation in animals.

Prophylaxis.—It is known that the tubercle bacilli may pass through the intestinal walls without producing a lesion at the point of penetration and thus give rise to tuberculosis in many parts

of the body. Because tubercle bacilli may get into the circulation it is necessary to exercise the greatest care with regard to tuberculous milk and meat. Every dairy cow should be tested by tuberculin and every dairyman should have a license. Non-tuberculous cows alone should be allowed to furnish milk for human consumption. It is to be remembered that the bacillus of bovine tuberculosis is more virulent for animals than is the bacillus found in the sputum of man. The virulence of the sputum bacillus can be increased by being grown in milk. In general, however, there seem to be marked variations in the virulence of the bacilli that affect individuals. Dr. Vaughan has seen a most rapidly-fatal case of phthisis florida develop in a magnificent specimen of young manhood two months after he began to live with a tuberculous mistress. There is, of course, in addition a difference in the susceptibility of different individuals and this varies in the same individual. Of the regular soldiers who went to Santiago not one probably had active tuberculosis. Yet within three months fourteen died of tuberculosis and a number developed the disease in its most active form. The conditions surrounding the tuberculous patient are important in this respect. While fifteen in 10,000 die in Hamburg from tuberculosis who are worth more than \$500, forty die in every 10,000 of those who are worth less than \$500. In order to eradicate tuberculosis the important first step is to improve the condition of the city poor.

Tuberculosis of Nose and Throat.—This paper was read by Dr. Jonathan Wright of Kings County. It will appear in a subsequent issue of the MEDICAL NEWS.

Ocular Tuberculosis.—Dr. Charles Steadman Bull of New York County said that tuberculosis of the eye is very rare. It occurs mainly as a secondary infection in individuals suffering from tuberculosis in some other part of the body. On the conjunctiva it is even more rare than on other structures in the eye and does not occur more than once in about 30,000 cases of affections of the conjunctiva. It occurs oftener in children, although in them the iris and choroid are affected oftener than the conjunctiva. Tuberculous infection of the conjunctiva is nearly always situated on the inner side of the upper lid and occurs only where some lesion of that membrane already exists. The lid is swollen and edematous and when everted a punched-out ulcer, with a greyish base or with grey nodules resembling miliary tubercles, is found. At times this bleeds easily on handling. Usually the pre-auricular gland is enlarged, sometimes also the submaxillary gland. Bacilli may be found in scrapings. They are hard to find, as a rule, in sections made from tissue excised in the neighborhood of the ulcer. It is not an unusual thing for the affection to be bilateral. The differential diagnosis involves trachoma, epithelioma and syphilis of the conjunctiva. In trachoma the main differential factor is the absence of bacilli. Epithelioma is diagnosed by the age of the patient

and by the glands being involved late. The diagnosis of syphilis is made by the greater acuity of the process and by the therapeutic test. The treatment of tuberculous conjunctivitis consists in the excision of the ulcer, if it is near the margin of the lid, with a plastic operation to fill up the defect, or thorough cauterization of the ulcer if it is at a distance from the edge of the lid.

Corneal and Retinal Tuberculosis.—Tuberculosis of the cornea is very rare. In strumous children, however, it is always well to suspect a persistent ulcer of the cornea as tuberculous. The treatment of these conditions is much more constitutional than local. Tubercles on the choroid do not occur as often as is thought. They are said to be frequent in meningitis and in general tuberculosis, but they are very rarely discovered during life as they exist mostly in young children in whom the difficulty of examination is very great. Tubercles in the retina and optic nerve occur as the result of the extension of the tuberculous process from the meninges. Gauze-like opacity covering the optic papilla is often noted. A picture not unlike this occurs in syphilis, however, but usually marked symptoms of meningitis have been noticed before the tubercles in the eyeground are found. Where tubercles can be seen in the eye the differential diagnosis of typhoid fever from general tuberculosis is clear.

Auricular Tuberculosis.—Dr. Seymour of New York County said that tuberculosis of the ear is usually secondary to pulmonary tuberculosis. Tubercles occur not infrequently on the tympanum, but often run so latent a course that their presence is not noted until a discharge occurs. From the tympanum the infection passes through the drain of small bones into the internal ear and causes a chronic pathological process. Such affections develop only in anemic, debilitated patients. There is undoubtedly a communication of tuberculosis from the throat through the Eustachian tube to the ear in tuberculous patients. The prophylaxis of auricular tuberculosis requires the most careful management of laryngeal tubercle. Patients should be warned not to attempt to perform the Valsalva experiment, because tuberculous material may easily be forced into the Eustachian tube. For a similar reason the use of the Politzer bag for simple salpingitis should be avoided. There is no doubt that many patients have had infective material forced into the Eustachian tube by thoughtless inflation.

Treatment of Auricular Tuberculosis.—Constitutional treatment of patients affected by tuberculosis in any other of the structures of the ear is much more important than the local treatment. A progressive obstinate lesion may be arrested by a stay in the Adirondacks. If operations are to be done, an especially nourishing diet with tonic treatment should be given for several weeks before the operation. Granulations in the ear should be kept down by the use of the snare or by cauterization with chromic acid. Lactic acid has given such good results in laryngeal tuber-

culosis that it deserves a trial in auricular cases also.

Peritoneal Tuberculous Glands.—Dr. Maurice H. Richardson of Harvard University said that very few operations have as yet been done for tuberculosis of the glands of the peritoneum. However, there are circumstances under which operation not only relieves the patient of a painful condition, but probably saves life. Of late, since operation on the abdomen has become much more frequent, it has been found that enlarged glands occur in the mesentery much oftener than was thought. The symptoms of severe cases are abdominal pain, fever and tenderness. They resemble very much the symptoms of appendicitis. Usually, when the symptoms occur, the glands are already broken down and there may be an abscess in either iliac fossa. At times ascites occurs, but only in very advanced cases. The treatment of the condition is the opening of the abdomen and drainage. At times the symptoms from these enlarged glands are so severe as to indicate an acute trouble. Any of the glands in the mesentery may be affected and sometimes extensive operations are required for their removal. In the cases reported thus far, however, the glands have all been caseated and have shelled out rather easily. Large amounts of broken-down tissue can be thus removed without much risk. At times the removal of large portions of the mesentery may endanger the life of a portion of the intestine by disturbing its circulation. If this occurs it can be noticed rather easily after a few minutes by the darkened color of the intestine. When such a complication occurs a portion of the intestine must be excised. One risk involved in the operation is that the free anastomosis at the base of the mesentery may threaten serious hemorrhage, which, however, may be controlled by packing.

Urinary and Uro-Genital Tuberculosis.—Dr. Samuel Alexander of New York County then read this paper, which appears in this week's issue of the MEDICAL NEWS. (See p. 599.)

Bone and Joint Tuberculosis.—Dr. E. H. Nichols of Boston described the pathology of tuberculous bone lesions and illustrated by lantern slides the original focus in the epiphyseal cartilages and its gradual advance into the true bony substance with disorganization of joint structures. In Pott's disease the illustration showed the beginning of a tuberculous process in the bodies of the vertebrae and its gradual advance to the surface beneath the spinal ligaments. A very striking illustration shows that notwithstanding pronounced deformity the spinal canal remains absolutely unencroached upon by the tuberculous process. Nervous symptoms occur in Pott's disease either as the result of a subdural abscess, or of pressure on nerve-roots because of the development of the tuberculous processes around the spinal foramina. At times a sort of dislocation takes place because of the softening of the bodies of the vertebrae and then the upper fragment may press upon the cord. Dr. Nichols

illustrated how extraordinary extortion of the aorta may be as a consequence of the spinal deformity. In these patients, usually adults, the aorta, having reached its full development, has to accommodate itself to the shortened spinal column. In the treatment of certain cases of joint disease, it must be remembered that when conditions have become inveterate the circulatory system gradually accommodates itself to the altered state of affairs. If a misguided effort is made to restore former conditions as far as is possible with the deformity, the manipulation may cause interference with the blood supply. Dr. Nichols showed a case in which there had been ankylosis of the knee-joint with backward dislocation. In improving the position of the knee this backward dislocation was not corrected although the limb was straightened. The result was interference with the popliteal artery. The foot became gangrenous and had to be amputated. Later on amputation had to be done above the knee.

Cutaneous Tuberculosis.—Dr. John A. Fordyce of New York County read a paper on certain phases of tuberculosis of the skin and the superficial fascia. Although many other forms of cutaneous tuberculosis have been discovered in recent years, lupus presents such a distinctive picture with special features of its own that it still deserves a separate place. That it is surely tuberculous is known from the fact that at times generalized tuberculosis results from the scraping of a lupus patch. Besnier of Paris condemns this method of treating lupus for this reason. Epithelioma occurs so often in the scars of old lupus that there is no doubt that something more than chance causes it. The devitalized tissues of the tuberculous lesion seem to make an especially favorable nidus for its growth and its prognosis is much more grave.

Other Tuberculides.—Dr. Fordyce showed a series of other lesions of superficial tuberculosis. An interesting condition is lymphangitis, a tuberculous process following very closely a set of lymph-vessels. Other illustrations showed a series of glandular lesions in which only the lymph-glands had become infected and then, after caseation, broke down. All tuberculous skin affections are much more common in the young than in adults. Seventy-five per cent. of patients who suffer from lupus acquire the affection before they are twenty.

Differential Diagnosis.—Certain cutaneous lesions resembling those produced by the tubercle bacillus have been described in recent years. Of these the most prominent is blastomycetic dermatitis, caused by organisms which closely resemble the yeast. The most important affection that presents itself for differentiation is cutaneous syphilis. Dr. Fordyce presented a picture of a case in which most hideous deformity of the face had taken place in consequence of what was thought to be a tuberculous process. The therapeutic test showed that it was syphilis. The lesions healed in a few weeks under proper treat-

ment. Unfortunately, however, irreparable damage had been done to the tissues of the eyes and the nose.

FOURTH DAY—THURSDAY, OCTOBER 18TH.

Ichthyosis Hystrix.—Dr. Frederick Holme Wiggin read for Dr. George W. Goler of Monroe County a paper on the treatment by electric light of this usually obstinate affection. The case was one of congenital ichthyosis in which the arms from the lower third to the shoulder and beyond the axilla were covered by a series of brownish, roughened protuberances resembling flat warts. On the legs the affection extended from the malleoli up to the trunk, and patches existed on the abdomen and flanks. The cheeks and auricles were also scaly. The patient was subjected to electric light. Lanolin was rubbed into the arms and then the light, a twenty-ampere lamp, was concentrated on the affected parts by means of two eight-inch plano-convex lenses. After two sances of twenty minutes each the arms were much improved. After twenty days, with eighteen half-hour exposures to the light, the cure seemed complete. For the legs the arc light was used and its rays were concentrated by a nine-inch parabolic reflector. For three months the patient has remained perfectly well. During the summer he perspired freely from the affected patches. He has never perspired before from these areas. The severity of the case shows that this was one of the forms of true ichthyosis hystrix of which Hyde says, "In no case can a favorable result be anticipated." Notwithstanding this unfavorable dictum this case seems to have been completely cured.

Specific Corporeal Gravity.—Dr. Heinrich Stern of New York County reported a series of investigations upon the specific gravity of the body and upon the value of this factor in physical diagnosis. He has found that the human body in health varies in its specific gravity from about 1060 to 1075. Patients whose specific gravity is lower than 1060 are always delicate in health and usually have some serious organic disease. On the other hand, individuals whose specific gravity exceeds 1075 are apt to have some serious disturbance of nutrition or defect of metabolism. The subject is only just opening up, but it seems to promise to be of decided value in the differential diagnosis of neurotic conditions from true organic disease or from serious disturbances of metabolism. It is not unlikely that further developments may show that more explicit information can be obtained by this method of testing the corporeal specific gravity.

Aseptic Minor Surgery.—Dr. Douglas Ayres of Montgomery County said that now that asepsis has become so thoroughly established as the rational basic surgical principle, even the minor operations done in the practitioner's office must be performed as far as possible with every aseptic precaution. It is well worth the trouble it entails in the lessened worry over morbidity after operation. In addition the practitioner owes it

to himself and to his patients to do his surgery in the best possible manner.

Intestinal Obstruction by Meckel's Diverticulum.—Dr. John F. Erdmann of New York County gave the details of three cases of this anomalous character that have come to him for operation in the last six months. The condition, obstruction by the anomalous persistent diverticulum, is very rare, yet these three cases by that peculiar chance that always sends anomalies in series have been encountered in his private practice in so short a time. The symptoms of the condition resemble very much those of appendicitis. In the first case it was thought that acute appendicitis might be at the bottom of the symptoms. The incision for the condition was made the same as if for an appendicitis operation. The diverticulum was treated just as the appendix would be if it were the offending agent. If it was small, it was inverted into the intestine; if it was large, it was simply amputated and sewed up as if it were intestine. All three of the cases recovered without incident and have continued in good health ever since.

Ectopic Gestation.—Dr. Hiram N. Vineberg of New York County dwelt on the difficulty of making an assured diagnosis of this condition in many cases. Where the classical symptoms are present there is very little difficulty. Time is an important factor if the safety of the patient is to be assured. Whenever what seems uterine abortion, but with any suspicious symptom, occurs Dr. Vineberg suggests that an examination under an anesthetic should be made. This is the only method that will assure against the unexpected in these serious cases. This as a routine practice would save many lives. The difficulty so far with regard to these cases has been that the physician is put off his guard by the seeming simplicity of the conditions that obtain when he is first called to the patient.

Modern Minor Gynecology.—Dr. H. H. Goelet of New York County said that the resources of modern minor gynecology are too little valued by the general practitioner. In diagnosis the use of the microscope has rendered the possibility of more rational treatment much easier than before. Endoscopy of many body cavities has become a feature of modern diagnosis. Uterine endoscopy may give important information. Dr. Goelet exhibited a uterine endoscope that has proved itself of great service. In therapeutics the use of uterine irrigation promises to be of great value. Dr. Goelet presented a uterine irrigator which requires no dilatation of the cervix for its use and can consequently be employed in every-day office work. Electricity, though its employment has been decried, the benefit derived being set down to suggestion, has proved itself of too great practical value in too many hands to be so lightly dismissed. It must always be remembered that many gynecological symptoms either depend on or are aggravated by lack of nervous tone and the presence of constipation. For the first the gold and arsenic preparations

will be found to give brilliant results where many other things have failed. For chronic constipation the old Pharmacopœia cathartic pill, every third night, is better than most of the new-fangled remedies and it need not be increased to produce its effect.

Intraspinal Cocainization.—Dr. S. Ormand Goldan of New York County detailed some recent experience with this method of producing local anesthesia. A brilliant future seems to be opening up for this new adjuvant to painless surgery. There are certain disadvantages attached to the procedure as yet which may disappear as the technic improves. As it is some of the disadvantages that attach to general anesthesia are not completely done away with by this latest method, though it was hoped and promised that they would be. At times the shock of the operation and perhaps toxic symptoms from the cocaine produce an analogous post-operative condition in the patient to that familiar to us as the usual after-effects of ether or chloroform. On the whole, however, this new method is a distinct addition to our medical and surgical means of relieving human suffering and of extending without danger to certain classes of patients, as those suffering from heart and kidney trouble, all the benefit of the great advances in modern operative surgery.

Election of Officers.—The following officers were elected for the coming year: President, John A. Wyeth, New York County; Vice-President, Alvin A. Hubbell, Erie County; Secretary, Frederick Holme Wiggin, New York County; Treasurer, E. H. Squibb, Brooklyn; District Presidents, 1st, Charles B. Tefft, Oneida County; 2d, John T. Wheeler, Columbia County; 3d, Theron A. Wales, Chemung County; 4th, William H. Thornton, Erie County; 5th, J. C. Bierwirth, Kings County.

BOOK REVIEWS.

Manual of Pathology including Bacteriology, the Technic of Postmortems and Methods of Pathologic Research. By W. M. LATE COPLIN, M.D., Professor of Pathology and Bacteriology, Jefferson Medical College, Philadelphia; Pathologist to Jefferson Medical College Hospital and to the Philadelphia (Blockley) Hospital; Bacteriologist to the Pennsylvania State Board of Health. Third Edition, Revised and Enlarged. 8vo., 846 pages. Philadelphia: P. Blakiston's Son & Co. \$3.50 net.

RESEARCH activity in every avenue of medicine brings forth so many results that each year witnesses some important shifting in mental attitude in one or another of the great problems of medical science. So constant is this striving for newer outlooks that the text of to-day on the morrow often becomes the history of a more primitive conception. Perhaps in no single department is this so apparent as in pathology,

where the labors of thousands are ever contributing their wealth of new knowledge. With these conditions it is no facile matter or light responsibility to be the author of a work on pathology. However, if the worth of a book may in any wise be measured by the appearance of successive editions within a comparatively short time, then Professor Coplin's Manual should rank among the best upon this subject. The present volume follows three years after the publication of the second edition.

Notwithstanding the many excellent qualities of the previous edition, considerable revision and addition of new matter have been made in accord with the newer standpoints. Instead of a reprint of the older text the author has conscientiously presented what he considers the best and most recent view-points in pathology. The book has been divided into three parts. The first relates to matters of technic. The chapter on post-mortems has been revised, and the same elaboration of other chapters is also noteworthy. Thus bacteriologic technic has been placed in a section by itself, and the technic of blood-examinations has been transferred to the chapter on the blood where it belongs. In the second part a consideration of general pathological problems is found; this has been enriched by liberal recasting. The remaining 396 pages are devoted to special pathology; and here new chapters have been added on the thymus body, ductless glands, muscles, bones, joints, and nervous system.

In the treatment of the subject the method has been along the traditional lines; the purely objective subordinates the reflective side. This seems unfortunate. A more philosophic presentation would commend the book to the more thoughtful and lead others into the by-ways of higher interpretation of cellular activity. However much we may differ with the general plan and some matters of detail, it must be conceded that this Manual will prove wholly satisfactory to a large class of readers interested in the morphological phases of pathology alone. The mechanical part of the book is good, and the addition of many new illustrations and some colored plates enhance the elucidation of the subject very materially.

Traité de Médecine et de Thérapieutique. Par MM. P. BROUARDEL, Doyen de la Faculté de Médecine de Paris, et A. GILBERT, Professeur agrégé à la Faculté de Médecine de Paris. Tome Septième. Maladies du Nez, du Larynx, de la Trachée, des Bronches et des Poux-mons. Paris: J. B. Ballière et Fils.

BROUARDEL'S and Gilbert's *Traité de Médecine* is too well known to need an introduction. As a system it compares very favorably with those of Nothnagel and Allbutt, although not attempting the monographic completeness of the former.

In the present volume of nearly a thousand pages, disease of the nose, the larynx, trachea, bronchi and lungs are considered. The symptomatology of diseases of the lung is very well

handled with a clearness and comprehensiveness characteristic of the best French work. The subject of different types of expectoration, the color; tenacity, shape, microscopical and chemical characters, occupies, for instance, some ten to twelve pages, all of which is distinctly practical and bears directly on the diagnosis of the respiratory conditions. The chapter on pneumonia by L. Landouzy is a very able presentation. Twenty pages are devoted to treatment. Grancher and Barbier have given a monograph on tuberculosis which compares favorably with those of Strauss and Cornet.

As a system this represents the best work of the French school, a school which is, we believe, being overlooked by many in their eager rush for voluminous German monographs.

Injuries to the Eye in Their Medico-Legal Aspect. By S. BAUDRY, M.D., Professor in the Faculty of Medicine, University of Lille, France. Translated by Alfred James Ostheimer, Jr., M.D. Revised and Edited by Charles A. Oliver, A.M., M.D. With an adaptation to the United States by Charles Sinkler, Esq., Member of the Philadelphia Bar. The F. A. Davis Company, Philadelphia, New York, Chicago, 1900.

It is well known how often injuries of the eye occur in the industries and manufactures. As they often give rise to dimness of vision or sometimes to complete blindness and so become the subjects of damage suits, the value of this little book will be thoroughly appreciated. The translation is excellently done and the editorial revision has been thorough. The fact that Dr. Oliver thought it worth reproduction in English is of itself an assurance that the book is thoroughly practical.

The Medical Diseases of Childhood. By NATHAN OPPENHEIM, A.B., M.D., Attending Physician to the Children's Department of Mt. Sinai Hospital. 8vo., 653 pages. Illustrated. New York and London: The Macmillan Company.

THE author of the *Development of the Child*, already reviewed in our columns, has tried something more ambitious in this present volume. He has, moreover, given the medical profession something new in the way of a text-book which cannot fail of commendation. The old-fashioned dry statistical mode of presentation has been cast aside and a book with a more narrative and descriptive text is given which in many ways is to be commended. From the pedagogic side we believe the book disappointing. The author has omitted many of the clinical features and substituted histo-pathologic details. The point of view is certainly open to discussion, but the recognition of the external features of a disease process is certainly more important than a knowledge of minute post-mortem alterations. Even these are faultily presented by microphotographs which, as a type of illustration, we be-

lieve are a great mistake. They no doubt are attractive to the taker who has seen the originals and unconsciously fills in the details by suggestion, but for the outsider we consider them for the most part worthless. The book we believe lacks balance. The rarest and most peculiar diseases, while of great scientific interest, are dilated on, especially their pathology, to the detriment of the more common ills of childhood. This being said, however, it is not meant to convey the idea that this feature derogates very largely from the value of the book as a whole. It is really an excellent exposition of the general subject of medical diseases of children. The work from the standpoint of the bookmaker's art is all that could be desired.

Transactions of the American Dermatological Association. Twenty-Third Annual Meeting. Official report by George Thomas Jackson, M.D., Secretary. Concord: The Rumford Press, 1900.

ALTHOUGH poor paper and a paper binding give a cheap appearance to this book, its contents are furnished by some of the leading skin specialists. M. B. Hartzell reports cases with areas of keratosis on the palms, soles, back and abdomen, believed to be due to arsenic, and in which epitheliomata subsequently developed. L. D. Bulkley gives a study of the urinary excretion in eczema, acne, pruritus, and other skin diseases. No special urinary changes appear to have direct connection with any particular skin lesions, but the findings indicate that there are errors in nutrition and metabolism which affect the skin. J. T. Bowen describes two epidemics of alopecia areata in a girl's school; S. Sherwell contributes on congenital dermatitis herpetiformis, and on the treatment of scabies. Several articles follow on macular leprides, infection in leprosy, indurated erythema with necrotic granuloma, epidermolysis bullosa, etc. Geo. T. Elliott opens a general discussion on "The Role of Pus Organisms in the Production of Skin Diseases," by an exhaustive tabulation of the pus-producing germs, and the pustular diseases. He separates the affections in which pus is an essential factor from those in which pus is merely secondary, such as scabies, pustular eczema, pustular syphilis, etc. T. C. Gilchrist makes a study of vesicular and pustular skin lesions, and describes a new branching organism, the bacillus (?) acnes, as the most frequent germ found in the pustules of acne vulgaris. Each paper is thoroughly discussed by the other members, and a number of photographic illustrations add to the value of the work.

BOOKS RECEIVED.

OPERATIVE AND PRACTICAL SURGERY. For the use of Students and Practitioners. By Dr. Thomas Cardwaine. 8vo., 661 pages. Illustrated. John Wright & Co., Bristol.

MANUAL OF PATHOLOGY. Including Bacteriology, the Technic of Postmortems, and Methods of Pathologic Research. By Dr. W. M. Late Coplin. Third Edition, Revised and Enlarged. 8vo., 846 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia. \$3.50.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Dr. H. A. Hare, assisted by C. A. Holden. Vol. III. September, 1900. Diseases of Thorax and its Viscera, Skin and the Nervous System, and Obstetrics. 8vo., 408 pages. Illustrated. Lea Brothers & Co., Philadelphia and New York.

A TREATISE ON MENTAL DISEASES. Based on the Lecture Course at Johns Hopkins University, 1899, and Designed for the Use of Practitioners and Students of Medicine. By Dr. H. J. Berkley. 8vo., 601 pages. Illustrated. D. Appleton & Company, New York.

A TREATISE ON DISEASES OF THE NOSE AND THROAT. By Dr. Ernest L. Shurly. 8vo., 744 pages. Illustrated. D. Appleton & Company, New York.

BRAIN IN RELATION TO MIND. By Dr. J. Sanderson Christison. Demi 8vo., 143 pages. Illustrated. The Meng Publishing Co., Chicago.

PSYCHOPATHIA SEXUALIS. With Especial Reference to Antipathic Sexual Instinct. A Medico-forensic Study. By Dr. R. v. Krafft-Ebing. 8vo., 586 pages. W. T. Keener & Co., Chicago. \$5.00.

A MANUAL OF OTOLGY. By Dr. Gorham Bacon. Second Edition. Illustrated. Demi 8vo., 422 pages. Lea Brothers & Co., New York and Philadelphia. \$2.25.

TRANSACTIONS OF THE LOUISIANA STATE MEDICAL SOCIETY. Twenty-first Annual Session, 1900. 8vo., 427 pages.

A DICTIONARY OF MEDICAL SCIENCE. By Dr. Robley Dunglison. Twenty-second Edition. 8vo., 1376 pages. Lea Brothers & Co., Philadelphia and New York. \$7.00.

THE ART OF BREATHING AS THE BASIS OF TONE-PRODUCTION. By Leo Kofler. Fifth Revised Edition. Demi 8vo., 278 pages. Illustrated. E. S. Werner Publishing and Supply Co., New York.

SPEECH-HESITATION. By E. J. Ellery Thorpe. Demi 8vo., 75 pages. Edgar S. Werner Publishing and Supply Co., New York.

AN INQUIRY INTO THE CONDITIONS RELATING TO THE WATER SUPPLY OF THE CITY OF NEW YORK. By the Merchants' Association of New York. 8vo., 627 pages. Illustrated.

ORIGINAL CONTRIBUTIONS CONCERNING THE GLANDULAR STRUCTURES APPERTAINING TO THE HUMAN EYE AND ITS APPENDAGES. 8vo., 23 pages. Illustrated. American Journal of Ophthalmology, St. Louis, Mo. \$1.50.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS. A Manual for the Use of Physicians, Surgeons and Students. By Dr. Charles W. Purdy. 8vo., 406 pages. Illustrated. F. A. Davis Company, Philadelphia, New York, Chicago. \$3.00.

SIXTH OTOLOGICAL CONGRESS, LONDON. Transactions edited by E. Cresswell Baber. 8vo., 477 pages. Illustrated. The Southern Publishing Company, London.

SEVENTH ANNUAL REPORT UPON THE BIRTHS, MARRIAGES, DIVORCES AND DEATHS IN THE STATE OF MAINE FOR THE YEAR ENDING DECEMBER 31, 1898. Augusta, 1900.

MEDICAL DIRECTORY OF NEW YORK, NEW JERSEY AND CONNECTICUT, 1900. Published by the New York State Medical Association.

MANUAL OF DISEASES OF THE EYE. For Students and General Practitioners. By Dr. Charles H. May. Demi 8vo., 406 pages. Illustrated. William Wood & Company, New York.